

1942
rafine
llergic
gnosis
Silico
everal
K-Ray

ellows
guests
turner,
ucky;
sident
ohn A.
Hen-
al So-
cutive
ygall,
diana,
lin H.
diana
The
con-
diana

VOL. VIII

MAY 1942

No. 5

DISEASES

OF THE

CHEST

Official Organ of the Amer. College of Chest Physicians
Editorial & Business offices Physicians Postgraduate Press.
500 North Dearborn Street, Chicago, Illinois.

Copyright, 1942, by Physicians Postgraduate Press

MEMBER: ASSOCIATED EDITORS OF TUBERCULOSIS PUBLICATIONS



(A MONTHLY PUBLICATION)

Subscription: United States \$2.50
per year. Other countries
\$3.00 per year.

Entered as second-class matter
August 18, 1936, at the post office
at El Paso, Texas, under the Act
of August 24, 1912.

Editorial Comment

Physicians Need Vacations

During these trying times, it is more important than ever before, that you arrange to get away from your office and from your practice for a few weeks or a few days in order to relax.

Each of us has had to assume added responsibilities and additional burdens in connection with the war effort. A vacation will give you renewed vigor to carry on the work which lies ahead.

We can offer no better suggestion than that you arrange to attend the Eighth Annual Meeting of the American College of Chest Physicians. We can think of no better place to relax than at Atlantic City, *the ideal convention city*. The hotels of Atlantic City have made arrangements for your every comfort during the College meeting and for the meeting of the American Medical Association.

The program committee has again arranged an excellent program (see page 157 for further information). The scientific exhibits will be as interesting as any shown at previous meetings of the American Medical Association. A number of the Fellows of the College will exhibit.

If you want good fellowship, you will find it at the College meetings. If you want the latest information concerning scientific achievement or the latest developments regarding war medicine, you will find this too at the College meeting this year.

May we suggest that you write *today* for your hotel reservation. The American College of Chest Physicians will hold its meeting at the Hotel Dennis from June 6-8. A joint session with the American Bronchoesophagological Association will be held on Mon-

day, June 8th. The American Medical Association will meet from June 8-12. We'll be looking for you! *Committee on Arrangements.*

Revised Standards Of Chest X-Ray By U. S. Army

In this issue of the Journal you will find published the revised section XIII concerning "Lungs and Chest Wall" as released on March 28, 1942, by the Office of the Surgeon General, U. S. Army. The Council on Military Affairs of the American College of Chest Physicians takes this opportunity to extend its congratulations to the Surgeon General of the U. S. Army and to the Subcommittee on Tuberculosis of the Committee on Medicine of the National Research Council and to all of the other agencies which have cooperated in bringing about these worthwhile changes.

The regulations which were previously in effect worked a hardship upon many individuals, and in some cases, the United States Government was deprived of highly trained officers and men who were rejected because of the erroneous interpretation of physical findings shown on the x-ray plates. The Council on Military Affairs of the College feels that the physical findings and interpretation of those findings have now been clarified, and that these new regulations will benefit both the Army and the citizen. The Council wishes to call particular attention to the fact that the x-ray films of rejected registrants are being forwarded to the State Director of Selective Service of the state from which the registrant is selected. It is our hope that these films and records will soon be classified and followed through by each State Health Department.

C. M. H.

The Treatment of Tuberculosis in the Mentally III*

Evaluation of 66 Cases at the Hudson River State Hospital, Poughkeepsie, New York

ALEKSEI A. LEONIDOFF, M.D., F.A.C.P.**
Poughkeepsie, New York

The general problem of the fight against tuberculosis can be roughly divided into three groups:

- 1) Diagnosis and Segregation
- 2) Treatment
- 3) Rehabilitation

This problem has been studied thoroughly and worked out in detail for the tuberculous patients in the population at large, but very little has been done along these lines for the insane in New York state hospitals. Judging from the scarcity of literature on this subject, little has been done anywhere in the United States. Of course, the approach to this problem presents a great many difficulties when one starts to apply the same methods for the insane as for sane. Even among sane persons, the mental attitudes of tuberculous patients places them in entirely different categories. It is a well-known fact¹ that sane patients with prevailing moods of depression, anxiety, apprehension, and fatalism, as well as other forms of emotional and nervous instability, do not respond to sanatorium treatment and thoracic surgery as satisfactorily as other patients who have not these handicaps. For instance, 3 to 5 per cent of the patients in the tuberculosis sanatorium in Poughkeepsie (S. W. Bowne Memorial Hospital) failed to respond to treatment on account of lack of cooperation. Since this is true, you can readily see that tuberculosis work among the insane requires an entirely different approach and cannot be judged by ordinary standards. The best way to comprehend this difficulty is to compare the results of the usual methods of treating sane patients with the results of these same methods as applied to psychiatric cases.

A complete check and diagnosis of tuberculosis in the state hospital can be achieved

only through a survey of the entire population. This is done chiefly by roentgenography; other methods are of value only in a few cases and even then are not reliable. The difficulties that stand in the way of the routine examination are many and insuperable; it is almost impossible to collect sputum for examination; the physician cannot rely upon the history of previous pleurisy or hemoptysis; few of the patients are able to furnish any information in regard to their subjective symptoms; and as a rule, the physical examination is a failure because the patient refuses to cooperate or deliberately makes the examination impossible.

The following figures will give some idea of the work that has been done in diagnosing and segregating tuberculosis in the Hudson River State Hospital: in 1930, fifty-seven patients were diagnosed and segregated; in 1931, thirty-one; 1932, fifty; 1933, forty-seven; 1934, seventy; 1935, forty-six; 1936, fifty-four; 1937, sixty-two; 1938, eighty-two; 1939, one hundred and twenty-three; and 1940, sixty. Our real program started in 1936², but by January, 1941, four thousand eight hundred patients had been checked, and all tuberculous patients had been segregated—that is, all except the most disturbed whom we are not equipped to care for in the tuberculosis service at present. However, our survey is not complete, and while we now have enough facilities, our experience leads us to believe that we probably shall need more tuberculosis buildings in the future, especially for the disturbed types. The latter group presents a grave dilemma, for we have had to transfer them back to their respective services for special psychiatric treatments, thereby increasing the possibility of spreading infection among the non-tuberculous. We also have great need of separate wards for cooperative and non-cooperative patients, because the latter frequently incite the former to perturbed moods.

Table 1 shows the lapse of time between

* Read March 20, 1941, at the meeting of the Dutchess County Psychiatric Society.

**Attending Phthisiologist, Hudson River State Hospital, Assistant Superintendent, S. W. Bowne Memorial Hospital.

the date of admission and diagnosis. We may conclude from the time intervals here indicated that the majority of tuberculous patients contracted the disease in the hospital.

TABLE I

Lapse of time between admission and diagnosis.

Date of Admission to 1 Year	21
1 to 5 Years	16
5 to 10 Years	16
10 to 15 Years	7
Over 15 Years*	6
TOTAL	66

* 1, 22 Years; 1, 35 Years.

TABLE 2

Relationship between extent of disease when diagnosed and date of admission.

Time Between Admission and Discovery of Tuberculosis		Extent of Disease When Diagnosed	
1 Year or Less	21	Minimal	1
		Mod. Advanced	15
		Far Advanced	5
1 to 5 Years	16	Minimal	1
		Mod. Advanced	10
		Far Advanced	5
5 to 10 Years	16	Minimal	5
		Mod. Advanced	6
		Far Advanced	5
10 to 15 Years	7	Minimal	1
		Mod. Advanced	4
		Far Advanced	2
Over 15 Years*	6	Minimal	1
		Mod. Advanced	3
		Far Advanced	2

* 1, 22 Years; 1, 35 Years.

You will notice in Table 2 that there are 29 patients who were diagnosed after being in the hospital more than 5 years, and out of this group, 9 were far advanced and 13 moderately advanced. These stages are, as a rule, accompanied by profuse expectoration and highly positive sputa, and one wonders who infected these patients and how many they in turn have infected during these long years.

Rehabilitation does not concern us, for if the patient regains sanity, he is transferred to another sanatorium where treatment is continued and rehabilitation taken care of. But if he does not recover sanity, he remains with us, and rehabilitation is out of the question, at least for a long time.

Table 3 lists the different methods which are most frequently employed in treating tuberculosis, and I shall compare and discuss briefly our own experience with each.

TABLE 3

Usual methods employed in treatment of tuberculosis.

Sanatorium Regime
Pneumothorax
Intrapleural
Extrapleural
Intrapleural Pneumolysis
Closed
Open
Oleothorax
Phrenic Paralysis
Temporary
Permanent
Scalenectomy
Scaleniectomy
Multiple Intercostal Nerve Paralysis
Monaldi
Extrapleural Thoracoplasty
Modern Chemotherapy
(Used Singly or in Various Combinations)

Sanatorium regime, as you know, consists of regular rest periods, regular and supervised exercise, postural treatment, shot bags, regular time for food, normal hygienic measures, et cetera. In the sane, these measures alone bring excellent results. For example, postural treatment, which consists of raising the foot of each bed about twelve inches, gave the following results in sixty-five advanced cases reported³: out of 33 patients with cavity, 11 healed; out of 50 positive, 23 became negative. X-ray showed definite improvement in 60 per cent, no improvement in 30 per cent, and 10 per cent became worse. But in the insane, the sanatorium regime cannot be enforced with all patients; they are restless; some of them refuse to take food; at times they become so violent that they must be put in cold tubs; they use the shot bags as dangerous weapons instead of curative properties; and they assume the least helpful postures. Moreover, their utter disregard of the most elemental hygienic

DISEASES OF THE CHEST

MAY

TABLE 4
RESULTS OF PNEUMOTHORAX TREATMENT AT THE H. R. S. H. FROM 1936-1941

Name	Date Adm't. to Hosp.	Date Diag. as Tbc.	Date of Pneumo.	Lung Aff'd.	Tbc. Diagnosis	No. of Treat.	Length of Treat.	Sputum before Pneumo. P. N.	Gen. Cond.	Complications
1. A. B.	Nov., '27	Jan., '36	Jan., '36	R.	Mod. Adv.	26	9 mos.	x	poor	effusion
"	"	"	Mar., '38	R.	Mod. Adv.	11	3 mos.	x	fair	displacement of mediastinum
2. H. S.	Mar., '28	July, '35	Feb., '36	L.	Far Adv.	52	27 mos.	x	fair	adhesions
3. S. M.	Dec., '11	Jan., '33	Apr., '36	R.	Far Adv.	24	14 mos.	x	poor	spread
4. R. R.	Dec., '33	Oct., '33	Apr., '36	R.	Mod. Adv.	37	13 mos.	x	fair	spread
5. H. F.	June, '34	Apr., '36	Apr., '36	L.	Mod. Adv.	77	3 yrs. 9 mos.	x	fair	spread
6. H. K.	Dec., '30	Feb., '36	Apr., '36	L.	Far Adv.	20	13 mos.	x	fair	spread
7. R. C.	Aug., '35	Oct., '35	Apr., '36	R.	Mod. Adv.	1	1 mo.	x	fair	refused treat.
8. J. P.	May, '31	May, '36	May, '36	L.	Far Adv.	31	9 mos.	x	fair	thick pleura
9. P. C.	Feb., '15	Dec., '34	June, '36	R.	Mod. Adv.	109	51 mos.	x	fair	
10. T. H.	Aug., '22	July, '29	June, '36	R.	Mod. Adv.	5	1 mo.	Uncoop.	fair	no free space
11. J. G.	Jan., '19	Dec., '34	June, '36	L.	Mod. Adv.	59	19 mos.	x	fair	became non-coop.
12. S. K.	Dec., '23	Oct., '35	July, '36	R.	Mod. Adv.	86	3 yrs. 6 mos.	x	fair	spread
13. J. M.	July, '34	June, '36	July, '36	L.	Mod. Adv.	4	1 mo.	x	poor	no free space
14. J. V.	Apr., '36	Apr., '36	Aug., '36	R.	Mod. Adv.	7	3 mos.	x	fair	spread-effusion
15. A. H.	Oct., '25	Oct., '25	Aug., '36	L.	Mod. Adv.	2	1 mo.	x	fair	no free space
16. D. C.	Sept., '36	Oct., '36	Oct., '36	R.	Mod. Adv.	2	1 mo.	x	poor	hemorrhage
17. V. C.	Dec., '31	Nov., '36	Dec., '36	R.	Far Adv.	26	17 mos.	x	poor	effusion—resistive adhesions
18. L. B.	Jan., '37	Jan., '37	Feb., '37	R.	Mod. Adv.	7	3 mos.	x	poor	effusion
19. P. M.	Nov., '34	Feb., '37	Feb., '37	R.	Mod. Adv.	16	6 mos.	x	fair	thick pleura
20. J. W.	Oct., '36	Nov., '36	Feb., '37	R.	Mod. Adv.	16	2 yrs.	x	fair	spread and effus.
21. A. G.	May, '27	Mar., '37	Apr., '37	R.	Mod. Adv.	5	1 mo.	x	fair	spread—Int. Tbc.
22. J. C.	Jan., '32	May, '37	May, '37		Mod. Adv.	68	2 yrs. 8 mos.	x	fair	effusion
23. N. B.	Apr., '33	Dec., '37	Dec., '37	R.	Mod. Adv.	29	15 mos.	x	fair	adhesion
24. F. G.	Mar., '37	Dec., '37	Dec., '37	R.	Mod. Adv.	39	5 mos.	x	poor	thick pleura
25. M. V.	July, '03	Jan., '38	Jan., '38	L.	Far Adv.	16	3 mos.	x	poor	spread—adhesions
26. S. W.	Feb., '34	Nov., '37	Jan., '38	L.	Far Adv.	13	3 mos.	x	fair	broad adhesions
27. G. S.	Mar., '34	Mar., '35	Jan., '38	R.	Mod. Adv.	32	14 mos.	x	poor	effusion
28. J. T.	Jan., '29	Dec., '37	Jan., '38	L.	Far Adv.	28	4 mos.	x	fair	spread
29. I. O.	July, '30	Dec., '37	Feb., '38	R.	Mod. Adv.	94	2 yrs. 6 mos.	x	fair	adhesions
30. H. S.	Jan., '35	Feb., '38	Feb., '38	L.	Mod. Adv.	24	6 mos.	x	poor	spread—resis.
31. E. C.	Feb., '27	Feb., '38	Mar., '38	R.	Far Adv.	5	1 mo.	x	poor	spread
32. M. W.	July, '35	Sept., '38	Apr., '38	L.	Mod. Adv.	17	6 mos.	x	poor	erythema
33. J. T.	July, '34	May, '38	May, '38	R.	Far Adv.	30	15 mos.	x	poor	effusion
34. D. M.	Sept., '30	May, '38	May, '38	R.	Far Adv.	12	3 mos.	x	poor	weak
35. M. S.	Nov., '33	Jan., '40	Nov., '38	R.	Min.	7	2 mos.	Uncoop.	poor	thick adhes. pleura
36. S. L.	Feb., '26	Dec., '34	Dec., '38	L.	Min.	2	1 mo.	x	fair	spread
37. D. S.	Mar., '27	Feb., '39	Feb., '39	R.	Mod. Adv.	8	3 mos.	x	fair	hemorrhage
38. A. B.	Nov., '38	Nov., '38	Feb., '39	R.	Far Adv.	15	7 mos.	x	poor	empyema
39. J. M.	Apr., '38	Feb., '39	Feb., '39	R.	Mod. Adv.	13	2 mos.	x	fair	broad adhesions
40. C. A.	Apr., '32	Mar., '39	Mar., '39	R.	Mod. Adv.	46	19 mos.	x	fair	effusion
41. R. M.	June, '35	May, '39	May, '39	L.	Far Adv.	17	3 mos.	x	poor	spread
42. M. R.	Sept., '36	July, '39	July, '39	L.	Mod. Adv.	56	1 yr. 6 mos.	x	fair	effusion (small)
43. G. B.	Aug., '38	Oct., '38	July, '39	R.	Mod. Adv.	76	18 mos.	x	fair	
44. A. N.	Dec., '23	July, '39	July, '39	L.	Mod. Adv.	2	1 mo.	x	fair	no free space
45. W. R.	Feb., '27	July, '39	July, '39	L.	Mod. Adv.	6	3 mos.	x	poor	Adh. & thick pleura
46. H. L.	Aug., '27	Dec., '34	Sept., '39	R.	Far Adv.	16	3 mos.	x	poor	adhesions
47. A. L.	Jan., '23	Aug., '39	Sept., '39	R.	Min.	2	1 mo.	x	fair	no free space
48. F. B.	Jan., '12	Oct., '26	Sept., '39	R.	Mod. Adv.	22	5 mos.	x	fair	adhesions
49. S. C.	July, '39	Aug., '39	Sept., '39	R.	Far Adv.	13	2 mos.	x	poor	no free space
50. L. P.	May, '36	Dec., '36	Oct., '39	R.	Mod. Adv.	4	2 mos.	x	fair	no free space
51. J. C.	Sept., '31	Aug., '39	Nov., '39	L.	Mod. Adv.	35	1 yr. 2 mos.	x	fair	*adhes. effus.
52. F. S.	Nov., '39	Nov., '39	Dec., '39	L.	Far Adv.	1	1 day	x	poor	no free space
53. M. R.	May, '33	Jan., '40	Feb., '40	L.	Mod. Adv.	9	2 mos.	x	fair	refusing food
54. A. M.	Feb., '39	Mar., '40	Mar., '40	L.	Far Adv.	27	8 mos.	x	fair	hemmor.—spread
55. A. R.	Dec., '35	Apr., '40	Apr., '40	L.	Mod. Adv.	13	4 mos.	x	fair	br. adhs.—effus.
56. E. N.	Oct., '38	Oct., '38	Apr., '40	L.	Min.	47	10 mos.	x	fair	adhesions
57. T. C.	Oct., '35	Nov., '39	May, '40	L.	Min.	9	2 mos.	x	poor	effus. no free space
58. M. M.	Aug., '28	Feb., '39	June, '40-L;	July-R	Far Adv.	7	2 mos.	x	good	spread—opp. lung
59. M. R.	Jan., '34	Apr., '39	June, '40	R.	Min.	32	7 mos.	x	fair	
60. L. W.	Dec., '15	Nov., '37	July, '40	R.	Mod. Adv.	26	6 mos.	x	fair	none
61. F. M.	June, '17	Nov., '29	July, '40	L.	Min. L-1	1	1 mo.	x	fair	no free space
62. W. S.	Feb., '32	Aug., '39	Sept., '39	L.	Min.	22	5 mos.	x	fair	adhes. spread
63. S. W.	Apr., '33	Feb., '40	Sept., '40	L.	Min.	1	1 mo.	x	poor	none
64. C. W.	Sept., '40	Oct., '40	Oct., '40	L.	Mod. Adv.	15	3 mos.	x	fair	
65. T. R.	Jan., '36	Apr., '36	Oct., '40	R.	Far Adv.	4	2 mos.	x	fair	no free space
66. S. S.	Apr., '37	June, '38	Dec., '40	R.	Mod. Adv.	2	1 mo.	x	fair	no free space
Re-adm.	Dec., '40	Apr., '37						x	fair	

DISEASES OF THE CHEST

TABLE 4

RESULTS OF PNEUMOTHORAX TREATMENT AT THE H. R. S. H. FROM 1936-1941

% of Coll.	Results after Pneumo.	Sputum after Pneumo. P. N.	Date Pneumo. Discont.	Why Pneumo. was Discontinued	Date of Death	Sex M. F.	Age	Psychosis	Coop. or Non-coop.
0	ineffec.	x	Nov., '36	Resistive		x	39	D. P. (simple)	Non-coop.
33	ineffec.	x	May, '38	Discontinued for yr., tried again Thoracoplasty					
30	ineffec.	x	Mar., '37	Adhesions	May 9, '38	x	31	D. P. (Heb.)	Non-coop.
55	effect.	x	June, '36	Spread	July 4, '37	x	61	Ment. Def.	Coop.
10	ineffec.	x	Apr., '37	Died	Apr. 3, '37	x	51	D. P. (Heb.)	Non-coop.
60	effect.	x		Ended		x	41	M. D. (Dep.)	Non-coop.
85	effect.	x	June, '36	Spread	June 15, '37	x	26	D. P. (Heb.)	Coop.
0	ineffec.	Uncoop.	Apr., '37	Resistive	Nov. 22, '37	x	24	D. P. (Par.)	Non-coop.
75	ineffec.	x	Feb., '37	Resistive	July 24, '39	x	32	D. P. (Cat.)	Non-coop.
30	effect.	x		Good		x	56	D. P. (Heb.)	Coop.
0	ineffec.	x	July, '36	Improving		x	35	D. P. (Cat.)	Non-coop.
30	ineffec.	x	Sept., '37	Mental Condition Thoracoplasty		x	40	D. P. (Heb.)	Non-coop.
80	ineffec.	x	June, '36	Intestinal	Dec. 22, '39	x	48	D. P. (Par.)	Non-coop.
15	ineffec.	x	Aug., '39	Thoracoplasty	Mar. 31, '39	x	30	D. P. (Cat.)	Coop.
90	eff. Home	x	Nov., '36	Spread	Died	x	38	Undiagnosed	Coop.
0	ineffec.	x	Aug., '36	Died	Dec. 12, '36	x	46	Psy. with Men. Def.	Non-coop.
10	ineffec.	x		Died	Oct. 25, '36	x		Undiagnosed	Coop.
20	ineffec.	x	Apr., '38	Thoracoplasty		x	40	M. D. (Mixed)	Coop.
50	ineffec.	x	Apr., '37	Died	May 10, '37	x	28	D. P. (Heb.)	Coop.
25	ineffec.	x	June, '37	Died	July 8, '37	x	33	D. P. (Par.)	Coop.
60	ineffec.	x	Sept., '40	Mental cond. poor		x	31	D. P. (Par.)	Non-coop.
5	ineffec.	x	Apr., '37	Spread—Int. Tbc.	Apr. 24, '37	x	45	D. P. (Par.)	Non-coop.
85	effect.	x		Lung to re-exp.		x	28	D. P. (Heb.)	Coop.
85	effect.	Uncoop.		Died—Stat. Epi.	Mar. 29, '39	x	34	Epilep. Psy.	Coop.
15	ineffec.	x	May, '38	Spread—died	Aug. 11, '38	x	20	Psy. with Men. Def.	Non-coop.
15	ineffec.	x	Mar., '38	Spread	Oct. 4, '38	x	77	D. P. (Par.)	Non-coop.
55	ineffec.	x	Mar., '38	Died	May 25, '38	x	44	M. D. (Mixed)	Non-coop.
65	effect.	x	Mar., '39	Thoracoplasty		x	23	D. P. (Cat.)	Non-coop.
0	ineffec.	x	May, '38	Adhesions	May 10, '40	x	59	D. P. (Cat.)	Coop.
70	effect.	x		Continue treat.		x	43	D. P. (Heb.)	Coop.
35	ineffec.	x	July, '38	Weak	Aug. 17, '38	x	29	D. P. (Cat.)	Non-coop.
0	ineffec.	x	Mar., '38	No free space	May 24, '38	x	56	Alcoholic	Non-coop.
	effect.	x	Oct., '38	Resistive	Oct. 21, '38	x	29	D. P. (Cat.)	Non-coop.
15	effect.	x	Nov., '39	Adhesions		x	41	Ment. Def.	Coop.
0	ineffec.	x	July, '38	Died	July 24, '38	x	38	D. P. (Heb.)	Coop.
0	ineffec.	Uncoop.	Nov., '38	Thoracoplasty		x	38	D. P. (Cat.)	Non-coop.
0	ineffec.	x	Dec., '38	Uncoop.	Aug. 12, '40	x	54	Alcohol Psy.	Non-coop.
40	ineffec.	x	Apr., '34	Died	Apr. 26, '39	x	51	D. P. (Par.)	Coop.
0	ineffec.	x	June, '40	Uncoop. Empye.	Aug. 7, '40	x	47	M. D. (Dep.)	Non-coop.
20	ineffec.	x	Apr., '39	Adhesions (Trans.)	Died	x	43	Alcoholic	Coop.
60	ineffec.	x	Oct., '40	Spread	Jan. 21, '41	x	42	D. P. (Cat.)	Non-coop.
50	ineffec.	x		Spread	Aug. 9, '39	x	23	D. P. (Par.)	Coop.
90	effect.	x	'41 began	Re-expansion		x	42	D. P. (Cat.)	Non-coop.
75	effect.	x		Continue treat.		x	21	D. P. (Cat.)	Coop.
0	ineffec.	x	Aug., '39	Thora. to be done		x	47	D. P. (Par.)	Coop.
0	ineffec.	x	Sept., '39	Thora. was done		x	49	Gen. Par. Cer.	Coop.
40	ineffec.	x	Dec., '39	Spread	Jan. 18, '40	x	50	D. P. (Par.)	Non-coop.
0	ineffec.	x	Sept., '39	Improving		x	41	D. P. (Heb.)	Non-coop.
40	ineffec.	x	Jan., '40	Spread	July 1, '40	x	56	D. P. (Heb.)	Non-coop.
20	ineffec.	x	Oct., '39	Spread	July 11, '40	x	38	M. D. (Dep.)	Non-coop.
0	ineffec.	x	Nov., '39	To have Thora.?		x	42	D. P. (Par.)	Coop.
30	effect.	x		Continue treat.		x	26	D. P. (Heb.)	Coop.
0	ineffec.	x	Dec., '39	No free space		x	38	Psy. with Somatic Dis.	Coop.
95	effect.	x	Mar., '40	Thoracoplasty?		x	30	M. D. (Dep.)	Non-coop.
100	effect.	Uncoop.	Oct., '40	Re-expan. side Pneumo. on other		x	36	Psy. with Syph. Encep.	Coop.
90	ineffec.	x	Aug., '40	Spread	Aug. 29, '40	x	50	M. D. (Dep.)	Non-coop.
40	ineffec.	x		Trans. from hos. 12/10/40		x	47	M. D. (Manic)	Coop.
15	ineffec.	x	June, '40	Adh. Thick plu.		x	35	D. P. (Cat.)	Coop.
40	ineffec.	x		Cardio-vascular	July 25, '40	x	43	D. P. (Par.)	Coop.
30	effect.	x		Continue treat.		x	38	D. P. (Heb.)	Coop.
85	effect.	x		Continue treat.		x	40	D. P. (Heb.)	Coop.
0	ineffec.	x	July, '40	Thoracoplasty?		x	49	D. P. (Heb.)	Coop.
70	ineffec.	x		Continue treat.		x	34	D. P. (Par.)	Coop.
0	ineffec.	x		Resistive	Nov. 21, '40	x	55	D. P. (Par.)	Non-coop.
80	effect.	x		Continue treat.		x	28	D. P. (Cat.)	Non-coop.
0	ineffec.	x	Nov., '40	No free space		x	69	Psy. with Cer. Art.	Non-coop.
0	ineffec.	x	Jan., '41	Thora. refused		x	50	D. P. (Par.)	Coop.

measures endangers the health of the nurses and attendants in spite of all possible precautions, and for this reason we x-ray the employees in the tuberculosis service every four months.

In the modern tuberculosis sanatorium, artificial pneumothorax has been employed with gratifying results and, according to literature,⁴⁻⁵⁻⁶ it is still a method which gives most effective results. In this institution, out of 216 tuberculous patients in the unit we have applied this method in 66 cases, and I wish to present the results.

Indications for artificial pneumothorax were the same as for any tuberculous patient; namely: progressive disease with cavity, stationary disease with cavities where there is danger of spread, hemoptysis, and acute pneumonic tuberculosis. Contraindications: extensive and active process in the opposite lung; emphysema; asthma; hypertension; cardiac decompensation with the usual signs of dyspnea and cyanosis. Out of the 66 patients, 12 were found to be without free space; in other words, pneumothorax could not be induced; and the following tables were obtained from the remaining 54 cases. We had to divide our patients into cooperative and non-cooperative groups, because cooperation is a decisive factor in the cure of tuberculosis. This is shown in table 5.

TABLE 5

Effect of cooperativeness on result of pneumothorax.

Cooperative	45.96%
Effective	38.71%
Ineffective	61.29%
Non-cooperative	53.03%
Effective	17.14%
Ineffective	82.86%

There are but 53 cases recorded in table 6, as one case was bilateral. However, in this latter case the tuberculosis became quiescent, but the patient died eventually from cardiovascular embarrassment. Out of the 53, we had 23 cooperative and 30 non-cooperative. Fourteen, or 25.93 per cent, developed effusion; and 15, or 27.27 per cent, developed spread of disease in the opposite side. In this survey of complications, spread presents the most significant figures, for 12 of the 15 patients who developed spread were non-cooperative. The 5 resistive were, of course, non-cooperative also.

As far as effusion is concerned, our records show that the number of effusions (about 21 per cent) was much less than ordinarily

TABLE 6

Effect of uncooperativeness on the occurrence of complications.

Number of Cases	Minimal		Mod. Advanced		Far Advanced		Total	
	Coop.	Non-coop.	Coop.	Non-coop.	Coop.	Non-coop.	Coop.	Non-coop.
	4	3	13	19	6	8	23	30
Effusion			3	2	1	3	5	4
Adhesions	1	1	4			2	5	3
Effusion-Adhesions	2		1	2			3	2
None	1		3	4	1		5	4
Hemorrhage			1	1			1	1
Resistiveness*		1		3		1		5
Spread		1	1	7	4	2	3	12
Dead		2	4	12	5	6	9	20
Living	4	1	9	7	1	2	14	10

* Patients became resistive after pneumothorax was given; resistiveness disappeared after pneumothorax treatments were discontinued.

seen in other institutions. For comparing our incidence of effusion with that of the sane in tuberculosis sanatoria, I wish to give the following data: of 142 Trudeau Sanatorium⁷ patients, 57 per cent had effusion; out of 265 cases reported by Dumarest⁸, 70 per cent developed effusion. Thirty per cent of these groups later developed purulent effusion, approximately the same as in our group.

Table 7 shows the correlation between mortality, effectiveness of collapse, and duration of pneumothorax treatments. Even in the effective group, the longer duration of artificial pneumothorax gave rather unfavorable results, whereas in the sane, it has better prognostic value. Out of the total 27.28 per cent effective, 19.70 per cent are living and 7.58 per cent are dead. Out of the total 72.71 per cent ineffective group, 27.27 per cent are living and 45.45 per cent are dead. The entire 7.58 per cent dead of the effective group were lost within the first two years, and 39.39 per cent of the ineffective dead group died during the first year of artificial pneumothorax. If you compare these figures with similar figures in tuberculosis sanatoria for the sane⁸, the percentage of effective who died during the first year would be about the same; but in the ineffective group, 10 per cent more died in the psychiatric patients than in the normal.

TABLE 8

Comparison of sputum examinations before and after pneumothorax treatment.

	Before	After
Positive	59	38
Negative	5	24
Unobtainable	2	4

TABLE 9

Results of pneumothorax in patients with negative sputum.

Successfully Terminated Cases	5
Still Under Treatment	6
Pneumothorax Discontinued on Account of Complications	9
Dead	4

Table 8 is a comparison of sputa examinations before and after pneumothorax treatment, and below are the results of pneumothorax in patients with negative sputum. You will note that out of 54 artificial pneumothorax cases, only 5 were successfully terminated—in other words, one patient per year.

The difficulties encountered in inducing pneumothorax are many. Again and again,

TABLE 7

Influence of duration of pneumothorax on final results.

Duration of Artificial Pneumothorax			Effective	Ineffective
Less than 1 Year	Living	28.78%	7.58%	21.21%
	Dead	42.42%	3.03%	39.39%
1 to 2 Years	Living	10.60%	6.06%	4.55%
	Dead	7.58%	4.55%	3.03%
2 to 3 Years	Living	4.55%	3.03%	1.51%
	Dead	1.51%	0.00%	1.51%
3 Years	Living	3.03%	3.03%	0.00%
	Dead	1.51%	0.00%	1.51%
Total			27.28%	72.71%
Total Living			19.70%	27.27%
Total Dead			7.58%	45.45%

patients whose lesion has been unilateral, early, and near the periphery or at the apex, have had to be turned down for pneumothorax because of their mental condition. Also, pneumothorax has been started time and time again with excellent early results in the general clinical picture, only to have the patient become totally uncooperative after collapse was well started. This necessitated the postponement of refills, and therefore, expansion of the lung and formation of dense adhesions occurred. Then, when the mental condition quieted again, pneumothorax could not be given because of the adhesions, and so one watches a previously hopeful prognosis turn from bad to worse.

To carry out pneumothorax treatment properly, one must have either the patient's complete cooperation, or render him unconscious. It may be argued that the use of paraldehyde, nembutal, et cetera, could be used successfully, but this has not been our experience, because such medication would have to be repeated at least twice weekly at the beginning, as the patient is not only resistive and impulsive but mental confusion is added to the picture by the use of the drug, and we have frequently noted that it is more difficult to attempt such a delicate procedure after strong sedation, short of unconsciousness, than it would have been without the drug. It might be argued that intravenous sodium amytal or avertin by rectum could be used to attain our purpose and overcome the resistance and assaultiveness of the patient, but both drugs are known to have a depressive effect on the respiratory center and when we further insult respiration and induce vagus irritation by pneumothorax, the risk becomes too great. Consequently, we have had to pass over many cases that were physically ideal for pneumothorax.

We have a patient in Lakeview now, M. R., a chronic manic whose resistance to the spread of tuberculosis has been tremendous. She has withstood five years of intense physical overactivity, as well as tuberculosis. Until eight months ago she would have been an excellent subject for pneumothorax, but her mental condition was such that a general anesthesia would have been necessary for every refill. The disease is now bilateral and has progressed rapidly for the last eight months. The tragedy is that for four months

she has been steadily improving mentally and is now in a state where pneumothorax could be given were it not that her physical condition has progressed to such a point that pneumothorax is of no value. Her tuberculous prognosis, of course, is very poor.

Another patient, C. W., a male catatonic praecox of 32 years of age with a previous remission of twelve years after discharge from Central Islip, is now at Hillcrest. The unilateral lesion was picked up on his recent admission to this hospital, and by alternating promises and dire prophecy, we induced him to cooperate for pneumothorax. After an 80 per cent collapse was obtained, and his general condition showed the usual prompt improvement, he became excited, impulsive, negativistic and assaultive. For six weeks we have been unable to continue collapse therapy because of his mental condition, the lung has re-expanded, and he is again beginning to show constitutional symptoms. His mental condition not only prevents the proper administration of pneumothorax, but it is lowering his resistance and hastening general debility. Though the outlook for remission of the mental disease is quite favorable in these two cases, we are going to lose them because their tuberculosis cannot be controlled. In such cases, thoracoplasty should have been seriously considered.

In addition to the difficulty encountered in instituting collapse therapy by pneumothorax in these disturbed individuals, there exists also a large group who are passively indifferent to the initial introduction of air. While superficially cooperative, they exhibit marked restlessness, fearfulness in response to delusions, very defective judgment, and cannot, or will not, remain in bed for the necessary period of time between treatments. Restlessness, anxiety, overactivity, emotional tension, and worst of all, refusal to eat properly for long periods of time, occur again and again even in those patients who are sufficiently cooperative for collapse to be maintained. All these factors militate against beneficial pneumothorax. This type of collapse therapy requires a degree of understanding and sincere effort on the part of the patient which the majority of these individuals are not capable of sustaining. The question as to whether pneumothorax or

TABLE 10

Relationship between psychiatric diagnosis, tuberculosis, pneumothorax treatments and their end results.

<i>Psychiatric Diagnosis</i>	<i>Total Number</i>	<i>TB Diagnosis</i>	<i>Effective</i>	<i>Ineffective</i>	<i>Living</i>	<i>Dead</i>
Epilepsy with Psychosis	1	M. A. 1	1	0	0	1
Dementia praecox (Hebephrenic)	15	M. 2 M. A. 8 F. A. 5	0 4 1	2 4 4	2 5 1	0 3 4
Dementia praecox (Catotonic)	13	M. 1 M. A. 7 F. A. 5	0 2 0	1 5 5	1 5 1	0 2 4
Dementia praecox (Paranoid)	15	M. 3 M. A. 11 F. A. 1	1 3 0	2 8 1	2 6 0	1 5 1
Dementia praecox (Simple)	1	M. A. 1	0	1	1	0
Manic-depressive (Depressed)	5	M. 1 M. A. 3 F. A. 1	0 2 0	1 1 1	1 3 0	0 0 1
Manic-depressive (Manic)	1	M. 1	1	0	1	0
Manic-depressive (Mixed)	2	F. A. 2	0	2	1	1
Alcoholics	3	M. 1 M. A. 1 F. A. 1	0 0 0	1 1 1	0 0 0	1 1 1
Psychosis with somatic diseases	1	M. A. 1	1	0	1	0
Psychosis with syph. encephalitis	1	M. A. 1	0	1	0	1
Psychosis with cerebral arteriosclerosis	1	M. A. 1	1	0	1	0
Psychosis with mental deficiency	2	F. A. 2	1	1	1	1
General paresis	1	F. A. 1	0	1	0	1
Mental deficiency	2	F. A. 2	2	0	1	1
Undiagnosed	2	M. A. 2	1	1	0	2

M., Minimal; M. A., Moderately advanced; F. A., Far advanced.

TABLE 11

Comparison of death rates from tuberculosis of manic-depressive and dementia praecox.

<i>Year</i>	<i>Census M. D. Insane</i>	<i>M. D. Insane TBC Deaths</i>	<i>% M. D. I. Deaths % TBC</i>	<i>Census D. P.</i>	<i>D. P. Deaths TBC</i>	<i>% of D. P. Deaths TBC</i>
1933	472	6	1.3	2710	27	1.0
1934	451	2	.4	2703	17	.6
1935	429	3	.7	2691	15	.55
1936	451	4	.88	2651	21	.79
1937	459	6	1.3	2650	28	1.0

thoracoplasty is indicated, is one that should be approached from both the medical and psychiatric viewpoint in these cases. Psychiatrically speaking, probably the two most important questions to be evaluated are: (1) Will the patient be able to cooperate over the long period of time necessary for pneumothorax? (2) What is the patient's psychiatric prognosis? Certain psychiatric conditions are generally believed to carry with them a far more favorable prognosis than others. Examples of these conditions would be:

1) Manic-Depressive Psychosis (particularly where the patient is known to have recovered promptly from previous attacks.)

2) Episodes of Excitement or Confusion in Mental Defectives.

3) Certain carefully selected Catatonic Schizophrenics (particularly where the history notes previous remission).

4) Acute Alcoholism.

One would have good reason to be hesitant, for example, in suggesting thoracoplasty for a young manic-depressive with a minimal lesion who had a good psychiatric prognosis and in whom the psychic trauma resulting from an extensive and deforming operation might well exceed any good that might be done. We have had also a few young male alcoholics who were cooperative and who showed good results on routine tuberculosis care. In such cases and in episodic excitements in mental deficient, it seems obvious that thoracoplasty should still be regarded as a court of last appeal. Personally, the writer believes that the psychiatric ramifications of each individual case should be explored with the physician who is in charge of the service from which the patient came, and if necessary, the advice and suggestions of the clinical director would be requested in order to correlate the surgical procedure of choice with the patient's psychiatric condition. In this manner, it is believed that some unnecessary surgery might be avoided, and even more important, many more patients would receive surgical therapy at an early enough date to do them some real good.

Table 10 shows the relationship between psychiatric diagnosis and tuberculosis, pneumothorax and their end results. A few remarks should be made about the prevalence of tuberculosis among schizophrenics as op-

posed to other conditions. This subject is still controversial, and it appears that the consensus of opinion is that schizophrenics are more susceptible to tuberculosis.

The two conditions which are used for comparison with schizophrenia are manic depressive psychosis and psychosis with mental deficiency. These two were picked chiefly because they fall roughly in the same age group as dementia praecox, and they are the only psychoses that do compare in age. During the past twenty years, 67 to 72 per cent of reported tuberculosis in this hospital were diagnosed as schizophrenia. Nolan Lewis⁹ believes there is a biological as well as emotional immaturity in schizophrenics, and he cites the hypo-evolutism of the cardiovascular system and consequent pulmonary anemia and lowered resistance as factors to be considered in judging the prevalence of tuberculosis in schizophrenics. But of at least equal importance, and something which has not previously been accorded enough significance, is the fact that schizophrenics also make up 55 to 60 per cent of the permanent hospital residents. Undoubtedly schizophrenics remain in institutions for much longer periods of time than other patients of comparable age and thus constitute a relatively high percentage of the more or less permanent population.

During the past five years there have been approximately 2,600 schizophrenics in this hospital as compared to 450 manic-depressives. Yet, during these five years, the percentage of praecox dying from tuberculosis would usually be less than the percentage of the manics if the total number of patients suffering from these two mental diseases were taken into consideration. The following table covering the years 1933 through 1937 supports this claim:

Note that in only one year, 1934, was the number of deaths higher in schizophrenics from tuberculosis than it was for a comparable number of manic-depressives.

During a comparable five years the number of deaths from tuberculosis in the mentally deficient, as compared with total deaths in the same group, showed a percentage of 1.9 which is higher than that of either schizophrenia or manic-depressive psychoses when compared with the mental deficient population figures.

Unfortunately, when pneumothorax becomes ineffective, there is very little we can do to remedy the situation. Literature shows that so-called declivotherapy¹⁰⁻¹¹ gives very excellent results, but in our patients lack of cooperation prevented us from using this method.

If, as you realize now, we have difficulty in giving pneumothorax treatment, a very short procedure, you can imagine how much labor and inconvenience the treatment of empyema necessitates. The assistance of a number of attendants is usually required to handle the patient during these treatments. Rib resection, as a treatment for empyema, with its profuse discharge and prolonged washing makes the task even more complicated, and the end results are rarely satisfactory.

Here, as in so many other services², are we made painfully aware that our institution is understaffed. It is a pity that the authorities do not recognize and remedy this lack.

TABLE 12

Fate of patients not given pneumothorax.

	Number	Coop.	Non-coop.	Living	Dead
Minimal	2	1	1	2	
Mod. Advanced	6	4	2	4	2
Far Advanced	4	1	3	2	2

Table 12 reveals the fate of 12 patients to whom pneumothorax could not be given because of lack of free space. Four patients died and eight are still living. If one compares the number living with the same in the pneumothorax group, the poor results in the latter are more evident. Of course, no definite conclusion can be drawn as the total number is small; nevertheless, the inference is striking. Of the eight living in table 12, four have been selected for thoracoplasty, and we are waiting for permission.

Pneumolysis is a valuable operation for a small selected group of patients. The operation is simple, but it requires very definite postoperative management and is not entirely free from complications.

Case 23 was subjected to closed intrapleural pneumolysis. The patient had long thick adhesions which interfered with complete collapse of the cavity. She was sent

to the surgery, but the surgeons could not find the adhesion. Fortunately, with subsequent pneumothorax treatment, the adhesion gradually relaxed, and complete collapse was achieved.

Dr. A. D. Crecca¹² advocates so-called trans-thoracic phrenic nerve interruption during pneumolysis when the nerve is visualized through the thoracoscope and crushed if needed.

So-called open intrapleural pneumolysis is a more complicated procedure, but in skilled hands it gives very good results. The "magnitude of the operation and its potential dangers make it less desirable."¹³

We have had a few cases in which extrapleural pneumothorax might have been successfully used,¹⁴ but again lack of cooperation in the patients and especially their resistiveness made us hesitant to subject them to this method. Moreover, extrapleural pneumothorax is a very difficult surgical procedure requiring thorough thoracic training, and it is not without serious risks¹⁵ and dangerous complications. Because of these complications, we have ruled out this procedure. Moreover, refills should be given at least once a week for an indefinite period, and as I have stated, we cannot rely upon our patients, for we never know when a cooperative patient may become extremely resistive. When this happens the refill is not done, and the whole procedure loses significance. As the "operation is not simple, post-operative management exacting,"¹⁶ and "absolute bed rest for the first three post-operative months observed in every case,"¹⁷ our type of patient is automatically excluded. Another setback is the difficulty in getting permission for surgery. Very often the relatives either refuse permission or delay so long that the patient gets so much worse that any surgery becomes impossible.

Oleothorax can be used as an adjunct in maintaining pneumothorax collapse against oblitative pleurisy or as a help to pneumothorax in case of adhesions, fibrous-walled cavities, and thick rigid pleura. "Its legitimate uses are undoubtedly limited."¹³ We had one case of oblitative pleurisy, but oleothorax could not be used due to the progression of the disease. Dr. J. Paxton¹⁷ combined this method with extrapleural pneumothorax with favorable end results, when spu-

tum conversion was accomplished in 72.3 per cent, but he adds, "Absolute bed rest for the first three post-operative months has been observed in every case." We could not keep our patients in bed quietly even for three hours.

Unquestionably, phrenic nerve interruption is of value in selected cases,¹⁸⁻¹⁹ but it is contraindicated in those cases in which the failure of the cavity to close is due to lateral adhesions, in cavities adherent to the chest wall, in cavities covered with a thick pleural cap, and in multiple and large cavities. Therefore, phrenic nerve surgery could be easily applied in the case of ineffective pneumothorax on account of apical and diaphragmatic adhesions. But Dr. F. Cardis and Dr. A. Gilliard state,²⁰ "The functional disturbance which results from this operation is too great for it to be done when the chance of success is slender or when it is obvious that if it fails, thoracoplasty will be needed later." Dr. L. Graff²¹ reports very disappointing results in 228 patients operated on eight to ten years previously: healing was obtained in only 10½ per cent. We had only three such operations as preliminary preparation to thoracoplasty, and all three patients died after the latter.

Dr. Alexander,¹³ in discussing scaleniectomy and scaleniotomy, states, "I feel that the benefit to be expected from any of these uses of scaleniectomy and scaleniotomy, with the possible exception of that in pneumothorax cases, is too small to justify the operation."

Dr. Goldberg²² writes, "I believe that scaleniotomy alone or combined with phrenicectomy can be advised, if at all, as an operation preparatory to thoracoplasty."

Multiple intercostal nerve paralysis has very small indication and is used only to prepare patients for thoracoplasty or at the time when thoracoplasty is still contraindicated but the patient is in need of some measure to help overcome signs of activity in the opposite side.

We have had no occasion to use the three above mentioned procedures, and their indication is so rare, I shall not discuss them.

Monaldi is a very simple operative procedure and in selected cases gives very promising results,²³⁻²⁴⁻²⁵⁻²⁶ but of course, it requires a great deal of cooperation from the pa-

tient and naturally is not applicable to insane patients.

The first prerequisite for thoracoplasty is a skillful thoracic surgeon. The State Department of Mental Hygiene should admit the need of a trained chest surgeon and appropriate a sufficient remuneration for this purpose. We are fortunate in having the services of a general surgeon who helps us considerably, but we need a surgeon who is an expert in thoracic surgery.

The long experience of thoracic experts has shown us the necessity of appreciating the complex physio-pathological principles involved, so that today our efforts are directed, not so much toward performing a given surgical procedure in stereotyped fashion, but in adjusting such procedure, first, to the individual as a physiological unit; second, to the pathology as represented in the clinical and laboratory findings at a given period; third, to accomplishing a specific purpose, namely the collapse of a tuberculous cavity with consequent prevention of both extension and the absorptive phases of the disease, having in mind, however, the preservation of adequate pulmonary function. We, at this institution, must consider even further; that is, whether or not the patient's mental status and relative deterioration would preclude any anticipated benefits of surgical intervention.

Literature is full of reports²⁷⁻²⁸⁻²⁹⁻³⁰⁻³¹⁻³² which prove beyond doubt that thoracoplasty is the best modern method of treatment for tuberculosis and has accomplished dramatic results. Thoracoplasty was first tried in the Hudson River State Hospital in September, 1931, and the surgeon in charge used the old method of Dr. Sauerbruch. Three patients were operated upon by this method, and they all died shortly after the third stage. On going through the histories and x-rays of these patients, there is no question but that they perished due to insufficient resection of the ribs, and I am convinced that if the stages had been reversed, the results would probably have been much better. In 1933, the fourth case was operated upon for empyema, when the surgeon tried to obliterate pleural space. The failure of these first four thoracoplasty cases was responsible for the abandonment of this method until six years later. In 1939, we had

five well selected cases who were operated upon, and three cases in 1940. The first stage on all these patients consisted of removing the first three or four upper ribs, but unfortunately insufficient segments of ribs were resected, no vertebral processes were removed, and the results of these 8 cases were not encouraging. One patient died from operative shock after the second stage. Out of the remaining 7 cases, one had good results; two fair; and four, poor. I would like to give you more information in regard to the patient who died: he was a man of 40 with a small lesion in the left upper lobe. Pneumothorax was tried but could not be instituted due to the lack of free space. Sputum was positive, but later after retraction of mediastinum and trachea to the left, sputum became negative. In October, 1938, his sputum became positive again, and lesion showed signs of cavitation. He was operated upon in February, 1939. He had a stormy recovery with frequent hemorrhages. His temperature was up to 102°. In March, 1939, the second stage was performed, but the patient died from what appeared to be operative shock. The selection was good; the fatal end result was not from the operation itself, but rather from the mental condition of the patient. He tried to get up, was very restless and absolutely uncooperative.

The two patients who had fair results from thoracoplasty had had pneumothorax treatments previously. In one, the pneumothorax was very promising, but after the patient became uncooperative, it had to be abandoned. In the second patient pneumothorax was abandoned on account of the thick pleura and adhesions. Thoracoplasty was effective in these two cases, and we expected to get very good results; but again the patients became uncooperative and, by the end of the year 1940, showed signs of spread in the opposite lung. I believe if these patients had been operated upon before pneumothorax treatment was given, the results would have been much better.

Case No. 27 is a patient who had good results. She had pneumothorax for about fourteen months, and it was considered effective until positive tuberculous effusion appeared. She was transferred to the surgery, and the first stage was performed in April,

1939. She gained weight, sputum became negative, temperature and pulse normal, and physical examination failed to reveal presence of moisture. Her cough disappeared also.

The remaining four cases, we consider poor because thoracoplasty, up to the present time, did not collapse the cavities, and it is quite possible that three out of this four will need the second stage if permission is granted. All these four had pneumothorax treatment, but it had to be abandoned due to lack of free space and due to uncooperation.

The postoperative period is not without complications arising from the patients' unpredictable behavior. They remove dressings and scratch the wounds, so that we occasionally have to put their arms in casts to prevent infection. Once, on the fourth postoperative day, a nurse left one of the patients for a few moments. When she left, he was peacefully eating his luncheon, when she returned he was standing in the corner anointing his head with mashed potatoes, and a liberal portion was plastered over the wound.

"The sandbag, shotbag, pulley, brace and harness have been found indicated and useful, and there is experimental and clinical evidence that they are efficient."³³ It has been said that they must be "applied with patience and care."³³ "Their theory and practice should be explained to the patient and constancy of use repeatedly urged."³³ These statements naturally do not apply to insane patients, and we should diagnose our tuberculous patients as early as possible so they would not have to resort to these mechanical aids.

Modern chemotherapy is still in an experimental stage. The Mayo group³⁴ reports very promising results with the usage of Promin, a new sulfone compound in experimental tuberculosis. They claim that in 62 per cent of treated animals, the spread of tuberculous involvement, taken as an index of the degree of infection, was absent. In 24 per cent, the tuberculous involvement was minimal; in 10 per cent, moderate; and in 3.4 per cent, extreme. Other workers³⁵⁻³⁶ failed to get similar results and think that sulfa-pyridine and its derivatives are of no value in prolonging life of infected animals. Dr.

Wm. H. Feldman and Dr. H. Corwin Hinshaw³⁷ concluded that "although certain desirable modifications in the character of the tuberculosis occurred in most of the guinea pigs that were treated, the results do not imply that sulfapyridine would be of value in the clinical treatment of tuberculosis." This conception still holds true, but chemotherapy is in a state of constant development, and everyone who is interested in tuberculosis work looks forward to more practical achievements. Such a method of treatment would be most applicable to our type of patients.

It is my impression that the complications of pneumothorax treatment act unfavorably on the mental conditions of the patient in the majority of cases, and therefore it would probably be much better if we subjected them first to thoracoplasty, rather than to pneumothorax treatment. Of course, our thoracoplasty number here is very small, and we have no right to make definite deductions. Nevertheless, I personally am convinced that pneumothorax in most of our cases was a waste of time and energy and that thoracoplasty should be applied early, rather than as a last resort. We plan to continue to give pneumothorax whenever thoracoplasty cannot be done, and we shall watch these results with great interest.

From now on we plan to select, with greater care and exactness, patients for thoracoplasty who can be converted by only one stage from an open to a closed case, because the multiple stage operation will undoubtedly affect the patient as adversely as prolonged pneumothorax treatment.

Here is our task, and here is our hope for the future—that through the incessant search for early tuberculosis our fight may be won.

Conclusions

1) The usual methods employed in treatment of tuberculosis are not applicable to most psychiatric patients, therefore the approach should be entirely different.

2) Early diagnosis and segregation of tuberculous insane patients is especially emphasized.

3) There is a definite need for further segregation of cooperative from non-cooperative tuberculous patients.

4) Of the complications, the spread in opposite lung is most frequent and serious.

5) The figures cited prove that artificial pneumothorax in a great majority of cases is not a successful method.

6) Mental instability and unpredictable behavior of the patient are usually responsible for the failure of pneumothorax even in "ideal" selected cases.

7) Early thoracoplasty should be attempted rather than run the risk of prolonged pneumothorax.

8) The appointment of state thoracic surgeons who would take care of complicated thoracic surgery in the state hospitals seems advisable.

9) There should be a law permitting operation on the tuberculous insane without preliminary approval of the relatives.

10) The state and federal governments should recognize the fact that the state hospitals are understaffed and should remedy this condition, particularly in the tuberculosis units.

11) All employees in the tuberculosis unit should be watched for possible reinfection. We consider physical examination with x-ray of chest every four months sufficient.

References

- 1 Strecker, E. A.; Braceland, F. J., and Gordon, B.: "Mental Attitudes of Tuberculous Patients," *Ment. Hyg.*, 22: 529-543, 1938.
- 2 Leonidoff, A. A.: "Control of Tuberculosis in the Hudson River State Hospital," *Psychiat. Quart.*, 12: 754-766, 1938.
- 3 Brock, B. L., and Woodson, T. A.: "Postural Treatment of Tuberculosis," *Kentucky M. J.*, 36: 343-346, 1938.
- 4 Jennings, F. L.; Matill, P. M., and Nemec, F. C.: "Artificial Pneumothorax, A Resume of Twenty Years' Experience," *Amer. Rev. of Tuberc.*, 42: 431, 1940.
- 5 Packard, E. N.: "The Present Status of One Hundred Pneumothorax Patients After from One to Eighteen Years' Expansion of the Lung," *Jour. of Thoracic Surg.*, 1: 581-586, 1932.
- 6 Leslie, G. L., and Anderson, R. S.: "Intensive Collapse Therapy in Pulmonary Tuberculosis," *Am. Jour. Med. Sci.*, 193: 149-170, 1937; 194: 1-18, 1937.
- 7 Packard, E. N.; Hayes, J. N., and Blanchet, S. F.: *Artificial Pneumothorax*, Lea & Febiger, Publishers, 1940.
- 8 Dumarest, F., and Brette, P.: *La Pratique du Pneumothorax*, 3d Ed., Paris, Masson and Cie, 1939.
- 9 Lewis, N. D. C.: *Research in Dementia Praecox*, National Committee for Mental Hygiene, Inc., Publishers, 1936.
- 10 Panto, V.: "Contributo Clinico sulla Declivoterapia nei Pneumothoraci Insufficienti," *Lotta Contro la Tuberc.*, 9: 771, 1938.
- 11 Lelong, J. P., and Peyret, E.: *Declivity Treatment: Position Producing Decrease of Tension*

in Artificial Pneumothorax Complicated by Apical Adhesions, *Presse Med.*, 44: 1502-1505, 1936.

12 Crecca, A. D.: "Transthoracic Phrenic Nerve Interruption," *Jour. of Thoracic Surg.*, 9: 97, 1939.

13 Alexander, J.: *The Collapse Therapy of Pulmonary Tuberculosis*, Charles C. Thomas, Publisher, 1937.

14 Nissen, R.: "Extrapleural Pneumothorax," *Brit. Med. Jour.*, 1: 100-102, 1939.

15 Proctor, O. S.: "Four Years' Experience with Extrapleural Pneumothorax and Oleothorax," *Jour. of Thoracic Surg.*, 9: 392, 1940.

16 Newton, H. F.; Dawson, F., and Dunphy, J. E.: "Extrapleural Pneumothorax," *Amer. Rev. Tuberc.*, 41: 319, 1940.

17 Paxton, J. R.; Churchill, A. S., and Skillen, J.: "Extrapleural Pneumothorax and Oleothorax," *Amer. Rev. Tuberc.*, 41: 163, 1940.

18 Cutler, J. W.: "Phrenic Nerve Interruption," *Amer. Rev. Tuberc.*, 40: 26-54, 1939.

19 Potter, B. P.; Berry, F. B., and Bortone, F.: "Phrenic Interruption in the Treatment of Pulmonary Tuberculosis," *Jour. of Thoracic Surg.*, 6: 424, 1937.

20 Cardis, F., and Gilliard, A.: "Clinical Note on Paralysis of the Diaphragm and Thoracoplasty in Adult Pulmonary Tuberculosis," *Brit. Jour. of Tuberc.*, 33, No. 2, 104, 1939.

21 Graff, L.: "Fate of Patients Following Phrenico-Exeresis," *Zrschr. F. Tuberk.*, 80: 145-148, 1938.

22 Goldberg, B.: *Clinical Tuberculosis*, F. A. Davis Company, Publishers, 1935, Vol. II, D-249.

23 Kupka, E., and Bennett, E. S.: "Monaldi's Suction Aspiration of Tuberculosis Cavities," *Amer. Rev. Tuberc.*, 42: 614, 1940.

24 Dolley, F.: Editorial, *Amer. Rev. Tuberc.*, 41: 661, 1940.

25 Sisti, A.: "Intracavity Aspiration; Clinical Study," *Tubercolosi*, 31: 250, 1939.

26 Parodi, F.: "Endocavitary Aspiration," *Riv. di pat. e clin. d. tuberc.*, 13: 511, 1939.

27 Overholt, R. H.: "Selective Thoracoplasty with

Lung Mobilization, the Conservative Goal in Permanent Collapse Therapy," *Amer. Rev. Tuberc.*, 37: 152, 1938.

28 Miller, A. F., et al.: "Thoracoplasty in the Treatment of Pulmonary Tuberculosis," *Jour. of Thoracic Surg.*, 9: 634, 1940.

29 Overholt, R. H.: "Thoracoplasty in Older Patients," *Amer. Rev. Tuberc.*, 41: 143, 1940.

30 Sommer, N. J., Jr., and Ehler, A. A.: "Results of Extrapleural Thoracoplasty for Pulmonary Tuberculosis," *Amer. Rev. Tuberc.*, 41: 675, 1940.

31 O'Brien, E. J.; Day, J. C.; Chapman, P. T., and Tuttle, Wm.: "A Study of the Immediate and Late Results in 511 Patients Subected to Thoracoplasty," *Jour. of Thoracic Surg.*, 9: 364, 1940.

32 Freedlander, S. O., and Wolpaw, S. W.: "A Control Group for Studying the End Results of Thoracoplasty; An Analysis of the Course of Those Patients Refusing Operation," *Jour. of Thoracic Surg.*, 6: 477, 1937.

33 Oatway, W. H., Jr., and Gale, J. W.: "Mechanical Aids to Collapse Therapy," *Jour. of Thoracic Surgery*, 9: 656, 1940.

34 Feldman, W. H.; Hinshaw, H. C., and Moses, H. E.: "The Effect of Promin on Experimental Tuberculosis," *Proc. Staff Meet., Mayo Clinic*, 15: 695-699, 1940.

35 Heise, F. H., and Steenken, Wm., Jr.: "Sulfa-pyridine in Experimental Tuberculosis in Guinea Pigs," *Amer. Rev. Tuberc.*, 42: 801, 1940.

36 Follis, R. H., Jr.: "Sulfanilamide, Acetylsulfanilamide and Sulfapyridine," *Amer. Rev. Tuberc.*, 42: 117, 1940.

37 Feldman, Wm. H., and Hinshaw, H. C.: "Sulfa-pyridine in Experimental Tuberculosis," *Amer. Rev. Tuberc.*, 41: 732, 1940.

The author of this paper wishes to express his appreciation to Dr. Courtney Bennett and Miss Marguerite Campbell, R.N., for their help. For the cooperation and encouragement of Dr. R. P. Folsom, Superintendent, he is also grateful.

Healed Miliary Pulmonary Tuberculosis

S. S. BEVERLY, M.D.*
Oteen, North Carolina

Healed miliary tuberculosis of the lungs may be defined as a partial residual of acute miliary tuberculosis. A pulmonary involvement is referred to in this paper. It is impossible to differentiate clinically between the limited type of miliary tuberculosis of the lungs and the generalized variety of hematogenous origin; without observing the cases in the acute stage of the disease.

In the descriptive literature, some writers specify no pathology found in the other organs. This would substantiate and confirm the diagnosis of miliary tuberculosis of the lungs, limited type.

Other writers of equal authority are of the

opinion that cases occasionally become healed because the meninges were not involved during the acute stage. By inference, one would naturally conclude that such a case was of the generalized type of acute miliary tuberculosis of hematogenous origin. It is therefore evident that the cases may be of either type.

R. H. Fish, M.D.,¹ made a very extensive review of the foreign literature. He quotes several physicians in his abstract as follows: "Waller maintained miliary tuberculosis was curable in 1840. Wunderlick reported a case in 1860. The patient succumbed to an inter-current disease. The diagnosis of healed miliary tuberculosis was confirmed at autopsy." Bryan and Levitin² reported a case which

* Veterans Administration.

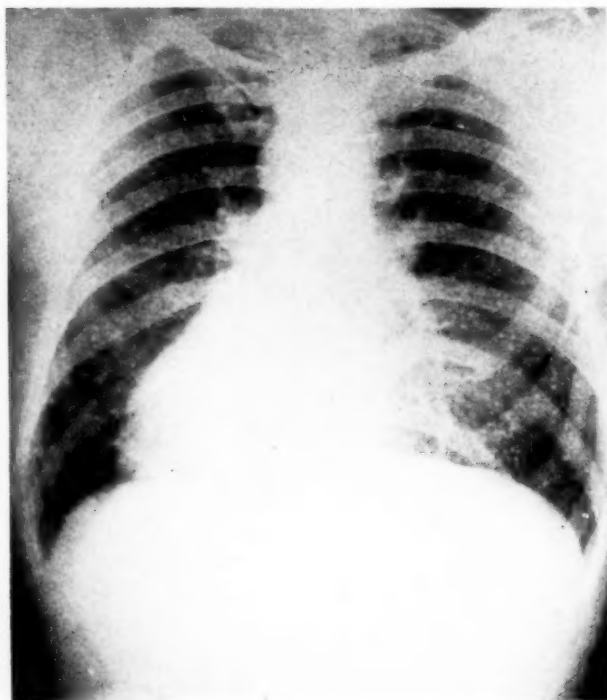
was diagnosed 35 years prior to death. The patient expired from carcinoma of the esophagus with obstruction at 65 years of age. The autopsy revealed healed miliary lesions in the lung tissue and not in the other organs. Marlow³ reported 36 cases he found

in the literature. Mayoral⁴ reports four cases of healed miliary tuberculosis of the lungs, with a discussion of the possibilities of non-tuberculous origin. Maxwell⁵ reported two cases of healed miliary tuberculosis of the lungs, limited type. Both cases were studied throughout the clinical course with recovery.

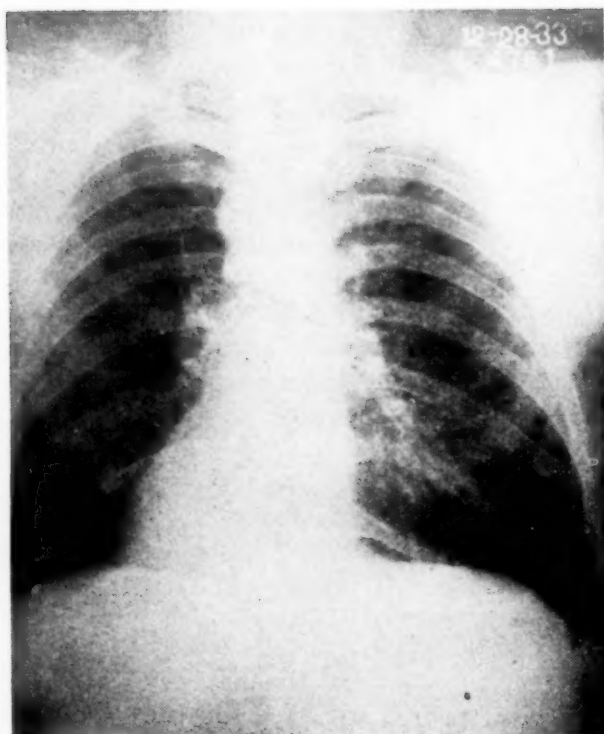
All physicians are familiar with the pathology of acute miliary tuberculosis of the lungs. The lesions are caseous and destructive. As the patient's resistance to the infection is increased; calcification and fibrosis follows, with the resulting small opaque densities as revealed by the x-ray or at autopsy later on. As the healing takes place, the necrotic areas are surrounded by lymphocytic infiltration and numerous giant cells. Later calcific opacities remain.

As the cases appear in the clinics, the only objective evidence demonstrable is a lung field through which are numerous small opacities, varying in size from two to four millimeters in diameter.

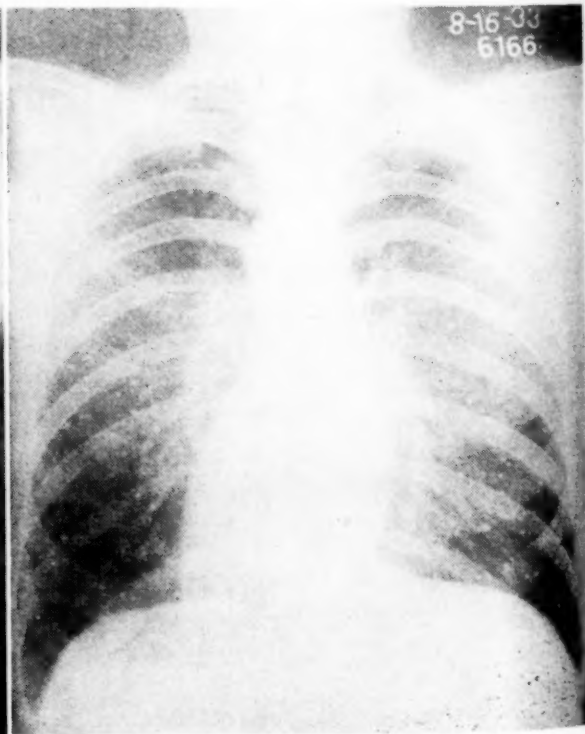
There are no demonstrable physical signs in the chest. The patients are in good physical condition as far as this involvement is concerned. They usually give a history of having had a serious illness in childhood, or later in life. This attack having lasted



No. 1
Healed Miliary Tuberculosis.



No. 2
Healed Miliary Tuberculosis.



No. 3
Healed Miliary Tuberculosis.

from four to six weeks. During this time he was not expected to recover on account of the seriousness of the malady. This was believed to have been the acute stage of the disease.

Out of approximately 15,000 chest admissions, the writer found five cases. They are shown on exhibits one to five, appended.

It would not be surprising in general practice if such a case was never seen.

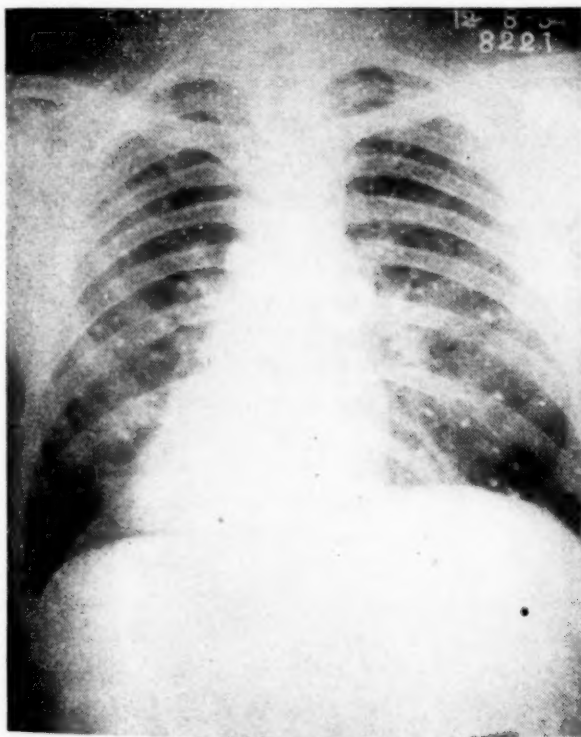
It is not the purpose of this paper to discuss the acute phase of acute miliary hematogenous tuberculosis, acute miliary tuberculosis limited pulmonary type, nor fungus infections. The differential diagnosis is much more complicated in the acute form, as miliary carcinosis, miliary abscesses, pneumoconiosis, multiple broncho-pneumonia, caseous peribronchitis, very fine bronchiectasis and Hodgkin's disease must be eliminated. Some authorities are of the opinion that some fungus infection of the lungs will give a similar picture as referred to on the appending exhibits, especially *aspergillus niger*. It is believed that the preponderance of evidence is suppurative of healed miliary tuberculosis.

Conclusions

- 1) Exhibits, one to five, illustrate cases of healed miliary pulmonary tuberculosis.
- 2) It is not disabling, and rare.
- 3) The patient is not cognizant of the condition. There is an absence of physical signs and clinical symptoms.
- 4) It is usually detected coincidentally in clinics where routine chest x-rays are made.
- 5) It is sometimes estimated as a clinical disability by those not familiar with the condition.

References

- 1 Fish, R. H.: "Chronic Miliary Tuberculosis in Children," *Archives of Disease in Childhood*, pp. 1-24 (Feb.) 1937.
- 2 Bryan, Lloyd, and Levitin, Joseph: "Healed Miliary Tuberculosis," *California and Western Medical Journal*, p. 374 (May) 1934.
- 3 Marlow, F. W.: "Miliary Tuberculosis of Lungs with Recovery," *American Review of Tuberculosis*, p. 529, 1929.
- 4 Mayoral, Antonio: "Multiple Miliary Calcifications in the Lung," *Clinical Radiology and Applied Sciences*, pp. 367-371 (March) 1941.
- 5 Maxwell, James: "Complete Recovery From Miliary Tuberculosis of the Lungs," *British Journal of Tuberculosis*, pp. 228 and 232 (Oct.) 1936.



No. 4
Healed Miliary Tuberculosis.



No. 5
Healed Miliary Tuberculosis.

Treatment of Pulmonary Tuberculosis Fake Cures

WILLIAM C. VOORSANGER, M.D.
San Francisco, California

Tuberculosis comes under the general heading of a chronic constitutional disease. No specific cure has ever been found for it—that is, it cannot be cured like malaria, typhoid, diphtheria, pneumonia, or even syphilis. It is not a self-limited disease—it is a progressive disease. Until the beginning of the present century when modern methods of treatment, such as scientific rest and pneumothorax came into vogue, tuberculosis was considered incurable and hopeless. Tuberculin, the result of Koch's discovery of the tubercle bacillus in 1882, had its trial for over twenty years, and proved ineffectual as a cure. In fact, it became a two-edged weapon, doing a great deal of harm in the hands of inexperienced practitioners who did not know that tuberculin acts by stimulating the tubercle in the lung, causing it to caseate—then sometimes to heal, but other times to break down into cavities. It often activated a healed lesion, creating active tuberculosis out of a quiescent focus.

During the era of tuberculin popularity over one hundred of its derivatives under various trade names were put upon the market and recommended as cures. No tuberculin product was ever guaranteed, thus saving many other products from being considered "fake cures." Many of them were sponsored by eminent scientists such as Koch, himself, Sahli, Von Ruck, and others. One of the famous cures of that day was the Spahlinger Serum, created by a Swiss chemist and for a time sponsored with a grant from the British Government. This also proved worthless. Sanocrysin, commonly known as a gold cure, after several years of trial, proved worthless, although its creators were men of science and it was used by many hospitals and tuberculosis specialists in the hope that it really might effect a cure. What patients must always remember is that doctors who treat tuberculosis properly are fully aware of all new developments and never hesitate to give any treatment of fair and long trial before condemning it. Chaulmoogra Oil, which proved so efficacious in the treatment of

leprosy, was given a fair trial in 1920 or 1921 in the treatment of tuberculosis, on the theory that the bacilli of the two diseases being similar, what helped one might help the other. I personally brought Chaulmoogra Oil from Honolulu in 1920 and was one of three physicians authorized to use it clinically on patients. After six months careful trial in many patients we decided that it was valueless as a cure. Still two years later a prominent drug firm in this country tried to commercialize its use in the treatment of tuberculosis.

Remedies such as various commercial concoctions of tuberculin, Chaulmoogra Oil or Sanocrysin, cannot be considered as "fake cures" unless recommended to do something they cannot do, either by a drug firm or by a doctor. It is just as culpable for a fully licensed doctor to guarantee a cure of tuberculosis by the use of an ethical preparation as for a quack to guarantee the same by a fake preparation. So-called ethical remedies have their place in the treatment of tuberculosis alongside all known, tried and proven remedial agents, but physician and patient must realize their limitations.

The difference between ethical and fake remedies might be explained to clarify our understanding of the subject. I think we may assume that any remedy given in good faith by a reputable physician can be considered ethical although it may be inefficient. Any remedy whose composition is secret, which is guaranteed to cure and which is advertised and fostered by unscientific or unscrupulous individuals may be considered under the general heading of "fake."

Cures which preyed upon public credulity have been employed since time immemorial. In ancient times, Pliny recommended the "gall of the wild boar or of the beef applied hot." During the days of witches and witchcraft all sorts of concoctions were brewed for different diseases and sometimes a Talisman or lucky token of some sort was used. The Chinese have always been great users of herbs, and even today, although they accept

modern treatment of tuberculosis, they still believe in taking concoctions brewed from various plants. There is, of course, some merit in the latter. Perhaps a good deal of so-called quackery is an aftermath of the days when there were no physicians and disease was a visitation from the Almighty for sins or misdeeds. The high priests of old were the religious, civic and medical heads. Medicines were unknown. The priest cured by prayer and if it didn't work and the patient died—well, he just deserved it. The present practice of Christian Science, based upon prayer, harks back to olden times, when the religious head cured by "the laying on of hands," or by "three elders of the Church" praying.

Perhaps some of the practices of our early physicians appear to us today just as ridiculous as the practices of the Chinese, Hindus, witches, or the priests of old. As late as the early part of the Nineteenth Century when the so-called philosophic school of medicine prevailed, physicians believed that any disease could be diagnosed and treated by argument. Pathology was unknown. Surgery was crude and doctors argued very much like the ancients—the patient getting well or dying often without the doctor knowing the nature of the disease.

Thus we see the basis for all quackery is human credulity. The patient who is a sufferer wants relief. The difference between an ethical practitioner and a quack is that the former never guarantees cure—the latter always does. Some cults have followers who are sincere in their belief that their particular system will cure disease. This could hardly be called quackery. When an individual of this cult, however, guarantees cure for all diseases by his methods, and accepts money for treatment from his gullible followers—that spells quackery.

During the past fifty years hundreds of quack drugs and remedies for the cure of tuberculosis have been foisted upon a credulous public with more or less commercial success. I say this deliberately, because no advertised remedies originating from unscientific sources ever have the interest of the patient under consideration. We can at this time only review a few of the quack remedies which have been advertised in recent years.

Perhaps one of the most important at-

tempts to extract dollars from gullible American patients was the Friedman "Turtle Serum," brought to this country in 1913 by its discoverer, Franz Friedrich Friedman. Friedman was a bacteriologist of Berlin who produced a vaccine from the blood of a turtle and claimed it would cure tuberculosis. Nothing had even been proven but a newspaper syndicate in the United States as a publicity stunt heralded the cure all over the country. Day after day front page articles in all the leading cities told of the great remedy discovered by a famous German professor who at that time was neither famous nor a professor. I still remember a movie of Dr. Friedman being escorted around Washington by the then Secretary of State, William Jennings Bryan. He was also received by the President of the United States. Sufferers from tuberculosis from all over the country were clamoring to meet Friedman and take his treatment. In two weeks he actually collected \$75,000 in large and small fees. The medical profession then stepped into the breach, realizing that commercialized quackery was at work. The public was again being victimized by a clever charlatan with the support of a newspaper syndicate. It is a good thing to remember never to put faith in a cure for tuberculosis which is first announced in the public press instead of in recognized medical journals. On a certain Monday morning in 1914, Friedman, who during several weeks had been the most publicized man in the United States, decided to open an office in New York City. He selected the most expensive location he could find. At the announced time reports have it that the crowd waiting to pay Friedman any amount asked extended for two city blocks. And then a peculiar thing happened. Dr. Herman Biggs, at that time Commissioner of Health for the city of New York, issued a ruling that no one could use a vaccine or serum on patients unless it was first submitted to the Health Department for examination and approval. The whole fake then blew up. Friedman could not afford a report on his preparation—he could not use it without the consent of the health authorities. So he folded up and returned to Germany with plenty of money, but not nearly as much as he had hoped to collect. I have dwelled at length upon the "Friedman Cure" because it demon-

strates how easily the public can be victimized and how important a part the organized medical profession plays in preventing these impositions. This episode was particularly tragic since this cure was produced by a scientific, educated physician, who knew he was deceiving the public.

Nuforal. This preparation was announced from a New York laboratory about 1922 as a new cure. I visited the Nuforal laboratory in June of 1922 because its product had been heralded as a sure cure. Being somewhat impressed by the character of the laboratory where it was manufactured, and the apparent sincerity of its promoters, I agreed to try it in patients for a period of six months. I was also shown a list of 200 prominent tuberculosis specialists who were trying it. This list was probably falsified to a large extent. I followed instructions, which were to inject the remedy at intervals for a period of three months. No result of any kind was obtained. I published a report stating that Nuforal had nothing but a commercial value. The laboratory threatened a libel suit but never carried out the threat. Both the "Friedman Cure" and Nuforal were originated by men of scientific attainment who did not hesitate to use their knowledge in the promulgation of untested, unknown cures for the purpose of extracting money from unfortunate sick people. Naturally one cannot be criticized for trying a method, a form of treatment in patients, even though he fails, if his intentions are sincere and his efforts not entirely influenced by commercial prospects.

The Abrams Electronic Method "cured" patients by means of introducing units of electricity into their bodies with an electrical contraption around their waists. Dr. Albert Abrams, a brilliant erratic physician of San Francisco, was so convincing in his promises that sufferers from all over the world consulted him and paid enormous fees. He guaranteed a cure for any disease but the fee had to be paid in advance. If the patient did not get well after the guaranteed period, some other disease was blamed for the failure. Many sufferers from tuberculosis were victimized by this fake cure. Some spent all their money and landed in other places. Many of them died during treatment. I personally treated several victims of Abrams' treatment. Most of them died.

The Fowler inhalation treatment flourished for many years in Alameda County. The patient was told that by inhaling a certain preparation his lungs would heal. A few improved as they probably would have under any or no treatment. All quacks hold up the few who have gotten well as examples to impress the gullible sufferers. Fowler would send patients who probably never had tuberculosis as emissaries to known cases and promise cures. Fowler himself was not a doctor and thus he came amuck of the State Medical Act. He was repeatedly arrested for violation of the law but always escaped with a fine and thus continued his practices, even going so far as to engage a supposedly licensed physician. He went so far as to solicit funds among his patients for a sanitarium. This was built and operated but soon failed financially. As far as it is known, Fowler and his remedy are today non-existent.

The latest quack remedy to make its appearance is Erus-Eruc, which read backwards spells "Sure-Cure," and which, according to the State Chemist of the California State Food and Drug Laboratory, is made up of sassafras, kerosene, and yellow dye. The preparation may be rubbed in externally, taken internally, and inhaled. Now why such a concoction promulgated by two laymen, Mr. and Mrs. Hurlbert of San Bernardino, California, should cure tuberculosis, no one knows, and no intelligent persons should believe. Still, Mr. C. Eugene Grier, Chairman of the Board of Supervisors of San Bernardino County, stated that it cured him of tuberculosis and induced his board to appropriate \$1500 of public money to experiment on twelve patients. The unfortunates were patients in the County care at the county tuberculosis sanitarium. The experiment was made legally possible by employing a licensed physician, who agreed to give the patients this medicine although he knew it was a quack remedy. What Mr. Grier's interest in the remedy was is hard to figure. He tried unsuccessfully to interest other counties. Perhaps he hoped to commercialize another fake and with the Hurlberts cash in on human gullibility. The victims of this fake were many, who lost their opportunity while taking the Hurlbert cure to have well-known remedies applied. The Hurlbert cure, since it

was sponsored by the County was scientifically observed by a committee of physicians and proven not only inefficacious but a rank fake. Mr. and Mrs. Hurlbert were arrested for violating the Medical Practice Act, fined, and put on two years' probation. Thus they are prohibited using their quackery to victimize other sufferers. They fortunately step out of the picture but someone else will step in. There are hundreds of fake cures for tuberculosis which have been tried and failed during the past hundred years. There are hundreds being advertised and used in this country today. The law can only step in when violation is apparent and then put some individual or group out of business. It is powerless to stop someone else initiating a new fake.

Tuberculosis and cancer sufferers are the easiest victims of the quack. These diseases

are of long standing—are still by many considered incurable, and the sufferer reaches for any straw.

Tuberculosis is no longer incurable. Our well-known methods are early diagnosis, scientific rest, good food, sunshine, a doctor with a conscience, collapse therapy. These are tried methods which give results. Don't get discouraged because your cure isn't always rapid or because John Smith got well faster than you. Loss of faith often sends the sufferer to someone who guarantees a cure for so much money on the line. Continue to have faith in accepted and proven remedies. Always suspect a secret remedy which guarantees cure. If sufferers from tuberculosis will follow these two tenets the faker and his fake remedies will disappear and no longer victimize a gullible public.

490 Post Street.

Office of the Surgeon General, U. S. Army, Washington, D. C.

SECTION XIII—Lungs and Chest Wall

Released: March 28, 1942

STANDARDS OF PHYSICAL EXAMINATION DURING MOBILIZATION

Revised January 15, 1942. Note: Foot notes on several of these pages refer to Class 1-A (Suspended). Defects referred to as Class 1-A (Suspended) are regarded as remediable defects which, when corrected, would qualify individuals so affected for Class 1-A, general military service.

SECTION XIII LUNGS AND CHEST WALL

	Paragraph
Chest examination	51
History	52
X-ray examination	53
Physical examination	54
Other examination	55
Class 1-A	56
Class 1-B	57
Class 4	58
General considerations	59

51. Chest examination.—The chest examination will include a roentgenogram, as well as the usual methods of physical diagnosis. A pertinent history of past chest diseases will be taken. Because of its importance and frequency, special consideration must be given to the detection of tuberculosis.

52. History.—Inquiry should be made about previous and present symptoms of respiratory disorders, particularly if abnormalities of the chest are discovered, if the weight is below normal without other explainable causes, if there is unexplained fever, or if there are indications of possible tuberculous lesions in others parts of the body, such as fistula in ano or enlarged lymph nodes. The history of chronic or frequently recurring cough and expectoration, hemoptysis, pleurisy or chronic laryngitis requires special investigation for a cause. It must be remembered, however, that pulmonary tuberculosis may exist in its earliest stages without producing any symptoms.

53. X-ray examination.—Chest x-ray films made on individuals entering the military service are to serve as permanent records. Care will be exercised in processing these films to insure their keeping qualities and in marking them in order that they may always be accurately identified. Chest x-rays will be made on selectees and applicants for voluntary enlistment and reenlistment as indicated below:

a) Selectees.—Chest x-ray will be made on selectees at the place of initial examination whenever practicable. Men who are not x-rayed at the time of the initial examination will be x-rayed upon arrival at reception centers and the films interpreted before induction.

b) Applicants for voluntary enlistment and reenlistment.

(1) Applicants for voluntary enlistment, or for reenlistment more than three (3) months following discharge from previous Army service will have a chest x-ray prior to acceptance whenever facilities are available for this purpose. Army facilities will be used to the utmost, but when these and the roentgen facilities of other Federal Agencies are not available, *competent* civilian x-ray laboratories may be utilized. Applicants for reenlistment immediately following discharge from previous Army service will have had an x-ray made prior to discharge and in such cases reexamination by x-ray is unnecessary.

(2) When it is not practicable to have chest x-rays made on individuals applying for enlistment and reenlistment prior to acceptance, if otherwise qualified, they may be enlisted and a chest x-ray made at the first Army station to which assigned. Recruits and those not applying within ninety (90) days for reenlistment whose x-ray of the chest is made subsequently to their acceptance and who are found to have disqualifying defects as a result thereof will be immediately discharged on Certificate of Disability.

(3) In order to insure that all individuals are given a chest x-ray as provided in (1) and (2) above, the date and fact of chest x-ray examination will be recorded under the heading "Carrier Examinations" on page 1 of the individual's service record. This information will be recorded upon the initiation of the service record on individuals whose enlistment or reenlistment examination has included a chest x-ray. For others it will be recorded upon completion of the chest x-ray examination.

c) Identification.

(1) Identifying marks which are photographed on the film at the time of its exposure are most satisfactory. This may be accomplished with the special attachment which forms an integral part of the photoroentgenographic unit or by lead foil stencils for use with standard x-ray equipment. The individual's identification tag is readily photographed upon the film. Its use when available will obviate the necessity for including the individual's name and serial number in the stencil or adding it to the film as described below if stenciling equipment is not available. Such identifying data as cannot be photographically recorded at the time the film is made will be added as soon as practicable after processing of the film is completed. Experience has shown that a good grade of white ink, well shaken to form an even mixture, provides the best medium for writing on acetate films; ordinary black ink, for writing on paper films. If available, a perforating machine making letters and figures of appropriate size may be used for recording additional data on films after they have been processed. Identifying marks other than those which are recorded photographically will be placed on the

light portion of the film corresponding with the subdiaphragmatic area. Care will be taken that identifying words and figures are printed, perforated, or written so that they are clearly legible. Data photographically recorded will be located in the upper right and left corners of the film.

(2) For individuals being examined for entrance into the enlisted service, the minimum identifying data will include the following: place of examination; date; the individual's last name, first name and middle initial; his home address; Army serial number, and in the case of registrants their local board identification code number. Except for the Army serial number, these data should appear in the upper right and left corners of the film as indicated below:

Camp Forrest, Tenn.
February 28, 1942

Johnson, Carl D.
1205 West Avenue
Nashville, Tenn.
48-037-005

(The local board identification code number will be found at the right side of the local board stamp placed on DSS Form 221.)

(3) Since serial numbers are not given until men have been accepted for service, all films of accepted men will be held at the home station of the Army examining boards until individual serial numbers have been obtained and entered thereon.

d) Disposition of films made in continental United States and Puerto Rico.

(1) Films made in the examination of men voluntarily enlisted or inducted into the service or discharged therefrom, after being carefully checked for proper identification, will be assembled in packages of appropriate size and mailed promptly under penalty cover to the Veterans' Administration, Kansas Avenue and Upshur Street, N. W., Washington, D. C. All packages of films sent to the Veterans' Administration should be labeled "Exposed X-ray Films" and should show the name of the Army organization making shipment.

(2) All chest x-ray films of registrants who are rejected for any reason (Class 4) and of those who are recommended for Class 1-A (suspended) because of border-line tuberculous or other chest conditions, or for any other reason, will be forwarded to the State Director of Selective Service at the state headquarters of the state from which the registrant is presented. Chest x-ray films of registrants who are recommended for placement in Class 1-B will also be sent to the State Director of Selective Service until such time as Class 1-B men as such have been ordered accepted for limited military service by the War Department. In the latter event the films of Class 1-B men will be sent to the Veterans' Administration as provided for the films of Class 1-A men. Films forwarded to State directors will be sent in separate packages

appropriately labeled as indicated below:

- (a) "Films of registrants recommended for re-examination in six months because of borderline tuberculosis or other chest conditions, or after correction of a remediable defect (Class 1-A (suspended))."
- (b) "Films of registrants recommended for placement in Class 1-B."
- (c) "Films of registrants rejected because of tuberculous or other chest conditions (Class 4)."
- (d) "Films of registrants rejected because of other than chest conditions (Class 4)."
- (e) Disposition of films made in the Hawaiian Department.

Chest x-ray films made on selectees in the Hawaiian Department will be held there for the present.

54. Physical examination.—This should include inspection, palpation, percussion and auscultation of the chest.

a) Structural abnormalities of the thoracic wall and striking rapidity, limitation or inequality of the respiratory movements are to be noted.

b) Abnormal physical signs in the lungs, pleura or mediastinum should be carefully checked to ascertain whether they persist or are only transitory.

c) *Particular attention should be focused upon the occurrence of pulmonary rales, which may be elicited only after the respiratory cough.* The subject should be instructed to exhale completely with the mouth open, immediately to cough before inhaling, and then to inhale deeply but quietly. Rales are heard most often at the beginning of inhalation after such an expiratory cough. A small patch of persistent rales at the apex, in the interscapular area or in some other part of the chest may be the only evidence of tuberculosis shown by physical examination.

d) It must be borne in mind that some tuberculous lesions may not produce abnormal physical signs. In other words, normal signs do not exclude tuberculosis.

e) The attention of examining physicians is particularly directed to the necessity of exercising great conservatism in their interpretation of physical signs over the apices. Misinterpretation of such signs as an indication of active tuberculosis would in many cases do the Government an injustice by leading to the exclusion of men who are fit for service.

f) Certain signs, such as the following may arouse suspicion, but unless x-ray and other studies reveal definite evidence of disease they will be disregarded.

(1) Slightly harsh breath sounds and slightly prolonged expiration over the right apex above the clavicle and the third thoracic spine, and/or the same signs at the extreme left apex.

(2) Slight alteration of the breath sounds anywhere in the chest without other abnormal signs.

(3) Clicks or crepitations which disappear after

a few deep breaths or coughs.

55. Other examinations.—It may be necessary to postpone decision in some cases until special studies and adequate observations have been completed. For example, subacute bronchopneumonia in an upper lobe of the lung may simulate tuberculosis, but proper laboratory studies of the sputum and blood and another x-ray and physical examination after three or four weeks usually suffice to make the differential diagnosis.

56. Class 1-A.—a) Acute bronchitis, provided acceptance is temporarily deferred until a final examination shows recovery without disqualifying sequelae.

b) Acute or subacute pneumonia, provided acceptance is deferred until a final examination shows recovery without disqualifying sequelae.

c) Scars of operation for nontuberculous empyema which have been healed for one year or longer, provided the function of the lung is good. X-ray and physical examination may show some fibrous thickening of the pleura, but no evidence of any sacculation or other residue of the empyema.

d) Acute or subacute fibrinous pleurisy, *definitely nontuberculous in origin*, provided acceptance is temporarily deferred until a final examination shows recovery without disqualifying sequelae. Such pleurisy usually is suspected or demonstrated on physical examination, not on x-ray examination.

e) Fibrous pleural scars and adhesions, revealed most often in the roentgenogram by isolated roughening or peaking of an interlobar fissure or of the apical pleura, provided there is no evidence of tuberculosis of the pulmonary parenchyma beyond the limits defined in 56f.

f) Apparently healed intrathoracic tuberculous lesions of slight extent demonstrable in the roentgenogram, but producing no audible rales after the expiratory cough during physical examination.

The following specifications of the limits of such lesions are intended to exclude persons with disease which is most likely to be in part caseous and therefore potentially hazardous. The limits are set arbitrarily to provide an objective basis on which the examiner may render a decision. All measurements refer to single standard 14 x 17 inch direct projection roentgenograms.

These lesions may consist of—

(1) Calcified residues of lesions of the intrathoracic lymph nodes, provided none of these exceeds an arbitrary limit of 1.5 cm. in diameter and the total number of such lesions does not exceed five.

(2) Calcified lesions of the pulmonary parenchyma, provided the total number of these does not exceed ten; and one of these may equal but not exceed 1 cm. in diameter; but none of the remainder may exceed 0.5 cm. in diameter.

In the roentgenogram such calcified lesions

should appear isolated, sharply circumscribed, homogeneous and dense.

In the case of lesions as defined in paragraphs 56f and 57c, the history should not reveal any previous definite symptoms or clinical evidence of active pulmonary tuberculosis. In no case is a person acceptable if there is evidence of an active inflammatory tuberculous process or evidence of past or present tuberculous cavitation.

g) Fracture of the rib or ribs, provided acceptance is temporarily deferred until a final examination shows recovery with or without deformity, and provided the residual deformity, if any, does not interfere seriously with respiratory movements.

h) Benign tumors of the breast or of the chest wall, provided the mass does not interfere with the wearing of a uniform or military equipment.

i) Small palpable lymph nodes of the axilla which apparently are not evidence of active disease.

57. Class 1-B.—a) Deformity of clavicle, ribs, or scapula of a degree disqualifying for general military service but not preventing the individual from successfully following a useful vocation in civil life.

b) Chronic bronchitis which is mild and not associated with emphysema.

c) Small fibroid lesions represented in the roentgenograms as sharply demarcated strandlike or well defined small nodular shadows not exceeding a total area of 5 sq. cm., *provided that acceptance is deferred until subsequent examination demonstrates that the lesion is stationary and not likely to be reactivated.* The minimum period of time to determine this is six months. It must be recognized that either progression or regression of the lesion indicates instability. Clinical judgment taking into consideration other factors, including age and race, must be exercised in estimating the likelihood of reactivation. Experience indicates a greater likelihood of reactivation of a lesion that appears to be stable in persons under 25 years of age than in older persons.*

58. Class 4.—Disqualifying defects such as—

a) Tuberculosis of the lungs or tracheobronchial lymph nodes, except as defined in paragraphs 56f and 57c.

b) Fibrinous or serofibrinous tuberculous pleurisy, and serofibrinous pleurisy of unknown origin. Inasmuch as pleurisy, with or without effusion, is a very frequent manifestation of active tuberculosis, all persons who have apparently recovered from pleurisy should be examined with the greatest care. Chronic fibrous pleurisy sufficient to cause marked retraction of the chest wall and of the mediastinal organs, or to cause a density in the roentgenogram which completely

obscures a considerable section of the pulmonary markings, should be considered disqualifying.

c) Empyema, or unhealed sinuses of the chest wall following operation for empyema.

d) Chronic bronchitis with emphysema.

e) Bronchial asthma.

f) Pulmonary emphysema with impairment of function.

g) Cystic disease of the lung.

h) Silicosis as represented in the roentgenogram by strandlike and nodular shadows, or any other form of severe pulmonary fibrosis.

i) Abscess of the lung.

j) Bronchiectasis.

k) Active mycotic disease of the lung.

l) Tuberculosis of the ribs and other parts of the chest wall.

m) Any malignant tumor of the breast or the chest wall.

n) Tumor of the lung, pleura or mediastinum.

o) Spontaneous pneumothorax.

p) Foreign body in the lung. A person may be accepted after a foreign body has been removed from a bronchus, provided examination shows recovery without disqualifying sequelae.*

q) Benign tumors of the breast or of the chest wall of such size and location as to interfere with the wearing of the uniform or military equipment.*

59. General considerations.—Examining physicians should not reject without confirmatory evidence persons who allege tuberculosis as a ground for exemption or discharge. Some soldiers may allege symptoms of tuberculosis with a view of securing discharge. Some persons may be expected to claim the existence of tuberculosis as a ground for exemption and fortify their claims by certification of physicians. Such certificates will not necessarily be accepted, but examining physicians will satisfy themselves as to the physical qualifications by their personal examinations. There will be cases in which pulmonary tuberculosis will have been previously diagnosed on the ground of subjective symptoms and of physical signs which are without any pathological significance. It is necessary, therefore, that conclusions of examining physicians will be based on their own findings and their own evaluation of the case. Statements of the individual as to symptoms will not be accepted as an indication of the existence of tuberculosis unless supported by objective evidence. Roentgenograms of the chest made previously may be accepted as part of the objective evidence, provided their authenticity is satisfactorily established.

On the other hand, men who desire to serve their country may conceal, from patriotic motives, symptoms of tuberculosis which they know or suspect to exist. Some tuberculous individuals may seek enlistment with a view of obtaining treatment and a pension.

* Classify as 1-A (suspended), if applicable. (See paragraph 4b (2) (a).)

* Classify as 1-A (Suspended), if applicable. (See paragraph 4b (2) (a).)

Eighth Annual Meeting of the American College of Chest Physicians

HOTEL DENNIS, ATLANTIC CITY, JUNE 6-8, 1942

The eighth annual meeting of the College is just before us. Quoting from a letter received from one of the prominent chest surgeons of this country, he says, "I know only too well that the high standard of your meetings now are a source of increasing interest and real professional advancement to all fortunate enough to participate therein." Thus, he refers to the two previous meetings of the College. The meeting this year will not only maintain the high standard set in these other meetings, but should excel them in the timely informative material, and the authority back of the papers presented.

The speakers on the regular scientific program are as follows:

"Results Obtained from the Examination of Partitioned Lung Areas," Dr. Raul F. Vacarezza and Dr. Alvaro Bence, Buenos Aires, Argentina.

"The Management of Pulmonary Cavities," Dr. William A. Hudson, Detroit, Michigan.

"Traumatic Rupture of the Diaphragm Simulating Pulmonary Tuberculosis. Transpleural Repair," Dr. Hans E. Schiffbauer, Los Angeles, California.

"Applied Anatomy of the Tracheobronchial Tree and a System of Bronchial Nomenclature," Dr. Chevalier L. Jackson and Dr. John Franklin Huber, Philadelphia, Pennsylvania.

"Adequacy of Diabetic Management in the Presence of Infection," Dr. Robert Wood Keeton, Chicago, Illinois.

"Trends in Frequency and Type of Surgical Procedures in the Treatment of Pulmonary Tuberculosis," Mr. G. J. Drolet, New York City, New York.

"Tuberculosis Case Finding by New Methods in Philadelphia," Dr. Frank Walton Burge, Philadelphia, Pennsylvania.

"Environment and Resistance in Tuberculosis," Dr. William F. Peterson, Chicago, Illinois.

"Pulmonary Tuberculosis Secondary to the Rupture of Cold Abscesses into the Lung," Dr. O. Auerbach, New York City, New York.

"Diagnosis and Treatment of Renal Tuberculosis,"

Dr. Herman L. Kretschmer, Chicago, Illinois.

"A Common Masquerading Lung Disease," Dr. Richard H. Overholt, Brookline, Massachusetts.

This year, we have also arranged for a Joint Session with the American Broncho-Esophagological Association, meeting in the twenty-fifth anniversary of their founding, so that on Monday, June 8, the following speakers can be heard:

Dr. Paul H. Holinger of Chicago, Illinois—"Kodachrome Visualization of the Physiology and Pathology of the Tracheo-bronchial Tree."

Dr. Louis H. Clerf and Dr. C. J. Bucher of Philadelphia, Pennsylvania—"Adenoma (Mixed Tumor of the Bronchus)."

Dr. Ralph C. Matson of Portland, Oregon—"Bronchoscopic Aids in Chest Surgery."

Dr. Joseph W. Peabody of Washington, D. C.—"Bronchoscopic Aids in Medical Conditions Within the Chest."

"Information Please" will again be one of the highlights of this session, with a noon-luncheon meeting on Saturday, June 6.

There will also be sessions of great importance on Military Preparedness, and the present situation of the health of our armed forces and the possibilities of their future needs. Outstanding leaders from the various armed services of our country will be the speakers.

A session on Undergraduate Medical Education will also be another feature during the meeting.

The usual Governors and Presidents Banquets will be found on the program, and at the President's Banquet this year a symposium by leaders from Pan-American countries will be given, the subject material pertaining to the tuberculosis situation in these various countries.

We expect a large turn-out for this most important meeting. Just prior to this meeting, an examination is being held for qualifying Fellowship candidates.

Benjamin Goldberg.

Organization News

NEW ENGLAND STATES CHAPTER OF COLLEGE TO BE ORGANIZED

The following program has been prepared for the meeting of the New England States Chapter of the College to be held at the Harvard Club, Boston, Massachusetts, May 18:

6:00 P. M.—Dinner.

7:00 P. M.—"The Chest Specialist and the War Effort," Murray Kornfeld, Chicago, Illinois, Executive Secretary, American College of Chest Physicians.

Adoption Constitution and By-Laws, New England States Chapter, American College of Chest Physicians.

Election of Officers.

8:00 P. M.—Scientific program, "Problems and Difficulties in Treating Tuberculosis Among Mentally Ill Patients," A. A. Leonidoff, M.D., Poughkeepsie, New York. Discussion to be opened by M. Gene Black, M.D., Boston, Massachusetts.

Moses J. Stone, M.D., Boston, Massachusetts, Regent, American College of Chest Physicians, presiding.

The American Psychiatric Association will hold its annual meeting at Boston, May 18-22 and Dr. Leonidoff's paper will be discussed by eminent psychiatrists as well as by chest specialists. These two meetings afford a splendid opportunity for joint discussion of the problem of tuberculosis in mental and nervous hospitals. The meeting will be open to all physicians and the members of the College in the New England States are urged to attend this meeting. For reservations, please contact Dr. Moses J. Stone, 520 Beacon Street, Boston, Massachusetts.

ILLINOIS CHAPTER TO MEET

The Illinois Chapter of the American College of Chest Physicians will hold its annual meeting at the Leland Hotel, Springfield, Illinois, May 19. The following program has been arranged:

11:00 A. M.—Business Meeting (Election of Officers).

12:00 Noon—Luncheon.

Motion picture: "Bronchial Obstruction as Visualized by Bronchoscopic Cinematography," Paul H. Holinger, M.D., Chicago, Ill.

Papers on subjects dealing with tuberculosis and diseases of the chest will be presented in

the following Sections of the State Medical Society program by Fellows of the College:

Section on Obstetrics and Gynecology: Dr. F. M. Meixner, Peoria.

Section on Radiology: Dr. Arthur S. Webb, Glen Ellyn.

Section on Otolaryngology: Dr. Paul H. Holinger, Chicago.

Darrell H. Trumpe, M.D.
Secretary-Treasurer
Springfield, Illinois

TEXAS CHAPTER MEETS IN HOUSTON

The Texas Chapter of the American College of Chest Physicians will hold its annual meeting at the Rice Hotel, Houston, Texas, May 11. An interesting program has been arranged for this meeting. Dr. Ralph C. Matson, Portland, Oregon, Editor, *Diseases of the Chest*, will be the guest speaker and he will give a paper entitled "Thoracoscopy in the Diagnosis and Management of Intrathoracic Tumors." For further particulars and for reservations for the meeting, please contact Dr. C. J. Koerth, Secretary-Treasurer, Texas Chapter, W. O. W. Hospital, San Antonio, Texas.

CUBAN MEDICAL PREPAREDNESS COMMITTEE

The Cuban Chapter of the American College of Chest Physicians has been invited to appoint two delegates to the Committee on Medical Preparedness for Cuba. Dr. Antonio Navarette, Regent of the College, and Dr. Alfredo Antonetti have been appointed by the Cuban Chapter for representation on this important committee.

The Executive Office of the College has made available to the Cuban delegation, the information on medical preparedness which has been carried on in the United States during the past two years.

NOMINATING COMMITTEE REPORTS

The following have been proposed by the Nominating Committee for election to office for the coming year: Dr. Jay Arthur Myers, Minneapolis, President-elect; Dr. George Ornstein, New York City, First Vice-president; Dr. Richard Overholt, Brookline, Massachusetts, Second Vice-president.

NORTH CAROLINA TO ORGANIZE CHAPTER OF COLLEGE

A meeting of the members of the College in North Carolina will be held at Charlotte on May 13 for the purpose of organizing a Chapter of the American College of Chest Physicians. An interesting program has been arranged for this meeting and a motion picture on Artificial Pneumothorax will be shown. There will be a dinner for the members of the College and their guests in connection with the meeting and for further particulars, please contact Dr. Karl Schaffle, 603 Flatiron Building, Asheville, North Carolina, Governor of the College for North Carolina.

LUNCHEON MEETING

Council on Military Affairs of the College, Hotel Dennis, Atlantic City, June 7, 1942.

Program

Chas. M. Hendricks, M.D., El Paso, Texas, Chairman.

"Tuberculosis in the Army," Brig. General C. C. Hillman, Washington, D. C.

"Tuberculosis in the Navy," Commander Robert E. Duncan, Washington, D. C.

"Present Status of the Tuberculosis Problem in the U. S. Veterans Bureau," Roy S. Wilford, M.D., Washington, D. C.

"Tuberculosis Control in National Defense," H. E. Hilleboe, M.D., Washington, D. C.

"The Relationship of the A. M. A. to the Tuberculosis Problem with Regards to the Above Services," Fred Rankin, M.D., Lexington, Kentucky, President-elect, American Medical Association.

SCIENTIFIC EXHIBITS FOR ATLANTIC CITY MEETING

The following scientific exhibits prepared by Fellows of the American College of Chest Physicians have been accepted by the Council on Scientific Exhibits of the American Medical Association:

Epidemiology of Tuberculosis in the Argentina (Its Influence on the Human Economic Value), Dr. Raul F. Vaccarezza, Buenos Aires, Argentina.

Results Obtained from the Examination of Separate Lungs, Dr. Raul F. Vaccarezza, Buenos Aires, Argentina.

The Role of Fungi in Diseases of the Chest, Dr. Irving L. Applebaum, Newark, New Jersey.

Criteria for Selection of Treatment in Cancer of the Larynx, Dr. Chevalier L. Jackson, Philadelphia, Pa.

Photography of the Larynx, Tracheobronchial Tree and Esophagus, Dr. Paul H. Holinger, Chicago, Illinois.

The above exhibits will be shown in the General Scientific Assembly, Convention Auditorium, Atlantic City, at the time of the meeting of the American Medical Association, June 8-12, 1942.

WANTED: Resident physician for 100 bed tuberculosis sanatorium near Chicago. State initial salary expected; age; and time available. For further particulars, address, Box A, Suite 1030, 500 North Dearborn Street, Chicago, Illinois.

MARYKNOLL SANATORIUM

(MARYKNOLL SISTERS)

MONROVIA, CALIFORNIA



A sanatorium for the treatment of tuberculosis and other diseases of the lungs. Located in the foothills of the Sierra Madre Mountains. Southern exposure. Accommodations are private, modern and comfortable. General care of patient is conducive to mental and physical well being.

SISTER MARY EDWARD, Superintendent

E. W. HAYES, M.D., Medical Director

OBITUARIES



CHARLES ALFRED DUKES
1872-1942

Dr. Charles Alfred Dukes, Oakland, California, a Fellow of the American College of Chest Physicians, died at a local hospital on March 13 at the age of 69 years. Dr. Dukes was born in Numa, Iowa, April 23, 1872, and graduated from the Cooper Medical College, San Francisco, in 1895. For many years he was a visiting surgeon at the Veterans Administration Facility at Livermore, California, and he was also a member of the staffs of the Merritt Hospital, the Highland-Alameda County Hospital in Oakland, and the Fairmont Hospital in San Leandro. He was Vice President of the American Medical Association and Vice President of the California Chapter of the American College of Chest Physicians at the time of his death. In the California State Medical Association, he had occupied practically all offices including that of President. He gave freely of his time to public service and to medical organizations. In the American Medical As-

sociation, he had served previously as a member of the House of Delegates from 1933 to 1938 and in 1940. In 1940 he became a member of the Committee on Medical Preparedness and more recently had been made Chairman of the Corps Area Committee of the Procurement and Assignment Service for physicians, dentists and veterinarians. He was a Fellow of the American College of Surgeons of which he was former Vice President. In every phase of medical activity in California, his wise judgment and leadership had been highly prized and in recent years equally in all phases of national concern, especially in the work of preparedness and of medical service in the war had he given unstintedly of his time—traveling from the West Coast to Chicago and Washington to participate in essential conferences. The death of Dr. Charles Alfred Dukes is a great loss to our country and to the medical profession.

DR. ANDREW PETERS
1890-1942

Dr. Andrew Peters, Springfield, Massachusetts, a Fellow of the College, died on January 8, 1942. Dr. Peters was graduated from the College of Physicians and Surgeons, Columbia University, in 1914. He served as Chief of Tuberculosis Service and Clinics of the Springfield Health Department Hospitals since 1936. He was a member of the National Tuberculosis Association and the Trudeau Society of Massachusetts. Dr. Peters contributed a number of papers to several medical journals.

DR. JAMES RANDALL COOPER
1903-1942

Dr. James Randall Cooper an Associate Member of the College, died on February 7, 1942. Dr. Cooper was graduated from the University of Nebraska College of Medicine in 1932 and had served on the staff of the State Tuberculosis Sanatorium at Rockville, Indiana, for several years. At the time of his death, Dr. Cooper was serving as Superintendent of the Smith-Esteb Tuberculosis Hospital at Richmond, Indiana.